

Thrift Savings Plan

To Retirement and BEYOND

PRESENTED BY

STEWART KAPLAN, CEBS®, AFC®, RFC®, RICP®
FEDERAL RETIREMENT THRIFT INVESTMENT BOARD



Thrift Savings Plan

FEDERAL RETIREMENT THRIFT INVESTMENT BOARD
77 K Street, NE · Washington, DC · 20002
1-877-968-3778 · tsp.gov

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**To Retirement
and
BEYOND**



Not an easy task...

**Retirement income planning is a really hard problem.
It's the hardest problem I've ever looked at.**

- William F. Sharpe



Agenda

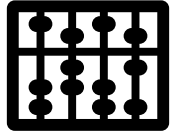
- Retirement income sources and risks
- Basic retirement income goals
- Estimating fixed income
- Estimating income from the Thrift Saving Plan
- TSP Life Annuity as a distribution option
- Retirement income risks
- Spending shock risks
- Retirement income drawdown strategies
- Drawdown and balance sustainability scenarios
- Key Takeaways



Retirement Income Sources and Risks



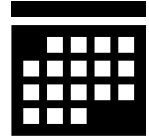
Typical retirement income sources for Federal employees:



How is the amount determined?



Is it protected from inflation?



How long will it last?



Who bears the risks?



FERS + other pension income

Savings (TSP)

Retirement Income and Risks

RISKS	FERS + other pension income	Social Security Retirement	Thrift Savings Plan + IRAs + other employer-based plans
Market (volatility)	No impact	No impact	Volatility dependent upon allocation
Inflation	Annual Cost of Living Allowance increases*	Annual Cost of Living Allowance increases	No protection
Longevity (can run out?)	Payments continue for life	Payments continue for life	No protection

Fixed Income

Volatile Income

*Beginning at age 62 (Except for special provision employees)

Retirement Income Matching

Income floor (Safety based)

Fixed Income

- FERS Pension
- Military Retirement
- Social Security
- Income Annuity

Investment income (Probability based)

Volatile Income

- TSP Savings
- IRA Savings

Reserves

Buffer Assets

- Home Equity
- Whole Life Insurance
- Family
- Safety Net

Essential
expenses/Liquidity

Discretionary
expenses

Legacy

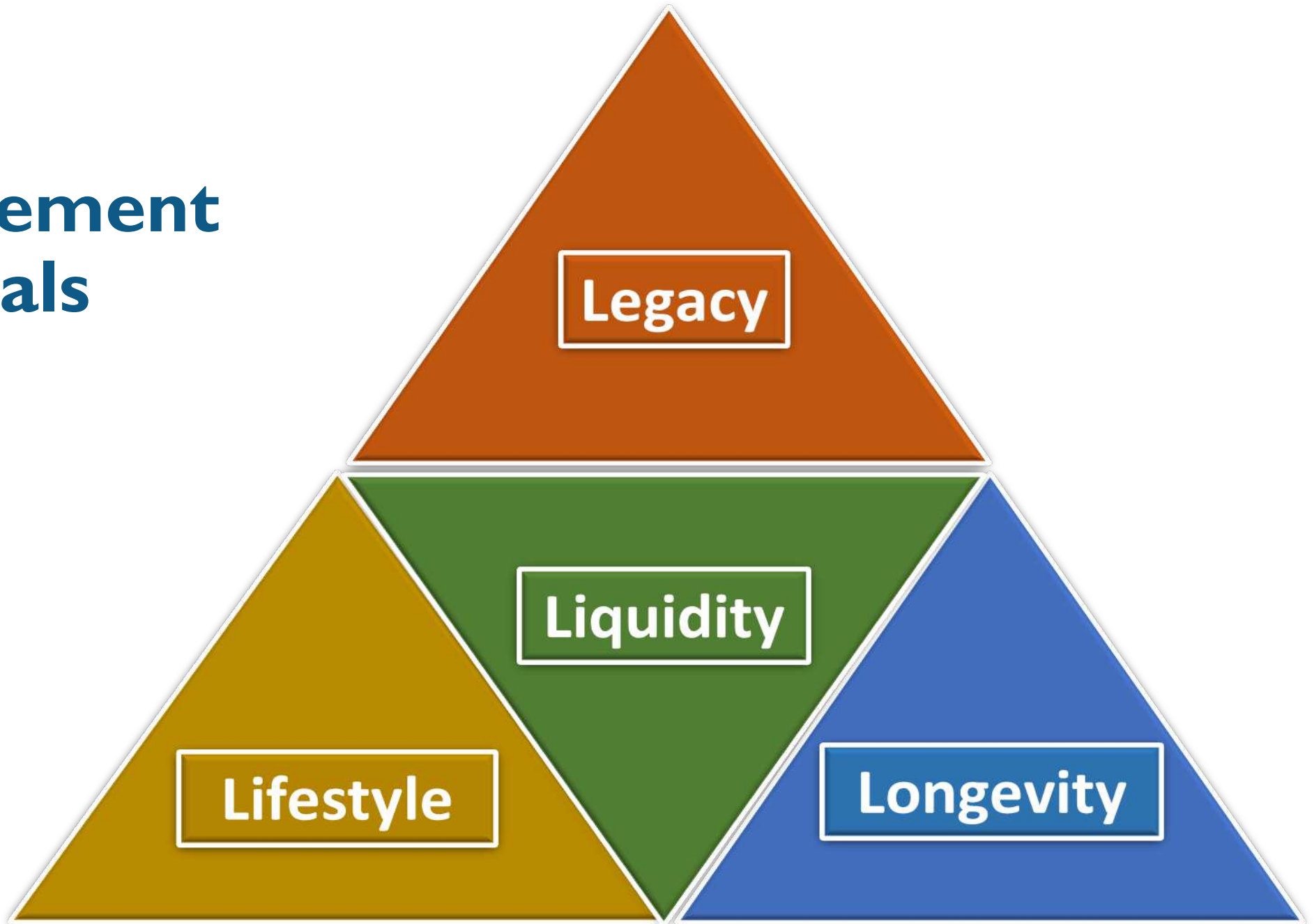
Spending shocks

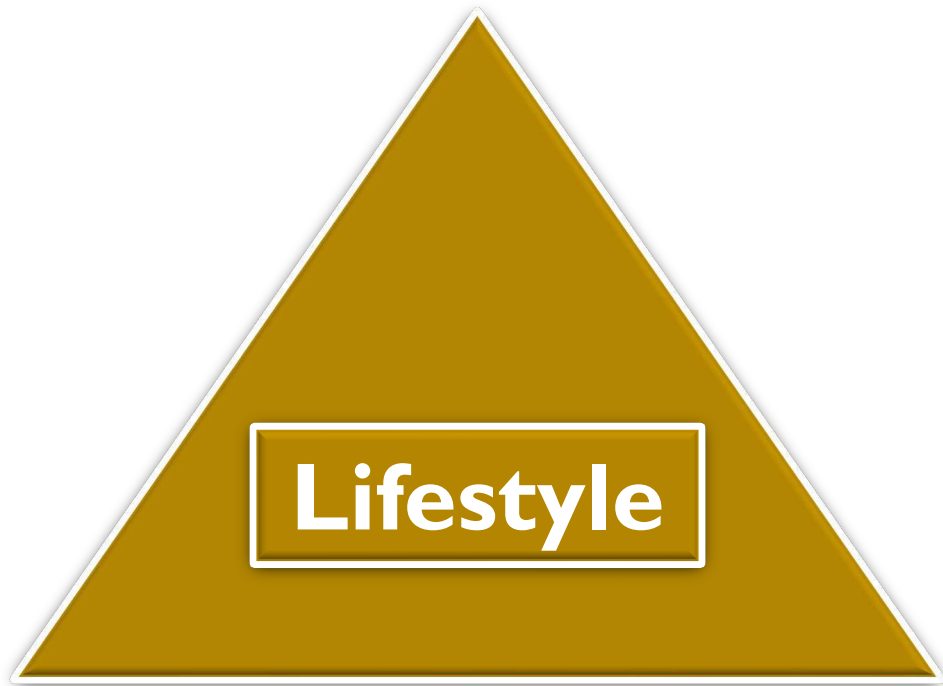
Basic retirement income goals

Prioritizing for lifestyle and sustainability



Basic retirement income goals





How do you want to live your life and maintain your desired overall standard of living in retirement?

Includes travel and leisure, self-improvement activities, social engagement, helping with financial needs.



This is a PRIMARY Goal



Thrift Savings Plan



How long will you need to fund your essential expenses in retirement?

Includes housing, health care, basic living expenses, and maintaining a basic level of financial independence.



This is a PRIMARY Goal



Thrift Savings Plan



How much will you set aside to provide funds for unexpected contingences?

Includes supporting family members during emergency's, major repairs or home improvement necessities, long-term care needs, or other life transitions.



How much do you want to leave to your family and/or others?

Includes leaving assets for subsequent generations or to charities.

Prioritizing retirement income sources to meet basic retirement goals

Fixed Income

- FERS Pension
- Military retirement
- Social Security
- Income Annuity (TSP Life Annuity)



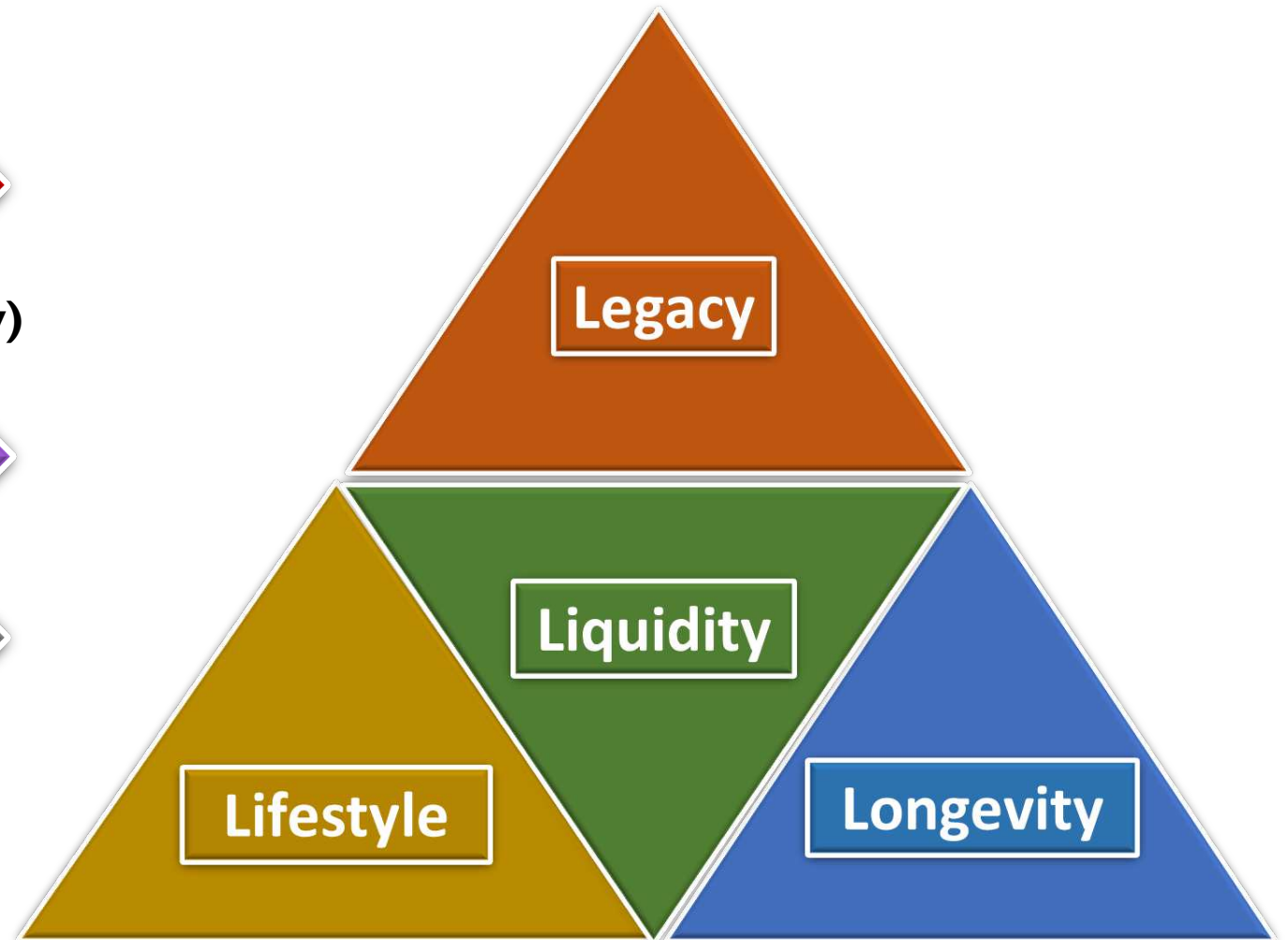
Volatile Income

- TSP Savings
- IRA Savings



Buffer Assets

- Home Equity
- Whole Life Insurance
- Other



Retirement cash-flow forecast (budget)

- Accounts for all foreseeable expenses and income streams that fall within the **Lifestyle** and **Longevity** goals.
- Must also account for **Liquidity** goal to cover spending for expenses that are necessary, but don't fall within our normal monthly spending.
- If there is a quantifiable **Legacy** goal, it should be accounted.
- Example templates for monthly budget planners and retirement planning financial worksheets can found in Excel.



Assessing personal retirement readiness

Using personal financial tools

Expenses that will or may decrease in retirement

**TSP contributions
OASDI (SS)
deductions**

IRA contributions

Income taxes

Life insurance

Commuting costs

Mortgage

**Reduced housing costs
if you “downsize”**

**Financial support for
children**

**Expenses that
will or may
increase in
retirement**

**Health care
Travel
Recreation
and hobbies
Vacation
property
Relocation**



Excel templates for budgeting and retirement planning

In Excel, go to File, click on “More templates”

The screenshot shows the Microsoft Excel 'New' template gallery. On the left is a green sidebar with navigation options: Home, New, Open, Info, Save, Save As, and Save as Adobe PDF. The main area displays a 'Good morning' greeting and a 'New' section with various templates. A red arrow points from the 'More templates' link at the bottom right of the 'New' section to a search bar. The search bar contains the text 'personal budget'. Below the search bar, a row of suggested searches is shown: Business, Personal, Planners and Trackers, Lists, Budgets, Charts, and Calendars. The 'Budgets' option is circled in red. Another red arrow points from the 'More templates' link to a search bar containing the text 'retirement'. Below this search bar, a row of suggested searches is shown: Business, Personal, Planners and Trackers, Lists, Budgets, Charts, and Calendars. The 'Budgets' option is also circled in red. At the bottom of the image, the Thrift Savings Plan logo is displayed.

Good morning

New

Blank workbook Retirement financial planner Retirement planner Bill paying checklist Welcome to Excel Formula tutorial PivotTable tutorial Gantt project planner Simple Gantt Chart

More templates →

personal budget

Suggested searches: Business Personal Planners and Trackers Lists **Budgets** Charts Calendars

retirement

Suggested searches: Business Personal Planners and Trackers Lists **Budgets** Charts Calendars

Thrift Savings Plan

Monthly Budget Example - Template from Excel

A1										
Create a Personal Monthly Budget in this worksheet. Helpful instructions on how to use this worksheet are in cells in this column. Ar										
	B	C	D	E	F	G	H	I	J	K
1										
2		PERSONAL MONTHLY BUDGET								
3										
4		PROJECTED MONTHLY INCOME	Income 1	\$4,300.00		PROJECTED BALANCE				
5			Extra income	\$300.00		(Projected income minus expenses)			\$3,405.00	
6			Total monthly income	\$4,600.00		ACTUAL BALANCE			\$3,064.00	
7						(Actual income minus expenses)				
8		ACTUAL MONTHLY INCOME	Income 1	\$4,000.00		DIFFERENCE				
9			Extra income	\$300.00		(Actual minus projected)			(\$341.00)	
10			Total monthly income	\$4,300.00						
11										
12		HOUSING				ENTERTAINMENT				
13			Projected Cost	Actual Cost	Difference		Projected Cost	Actual Cost	Difference	
14			Mortgage or rent	\$1,000.00	\$1,000.00	\$0.00	Night out		\$0.00	
15			Phone	\$54.00	\$100.00	-\$46.00	Music platforms		\$0.00	
16			Electricity	\$44.00	\$56.00	-\$12.00	Movies		\$0.00	
17			Gas	\$22.00	\$28.00	-\$6.00	Concerts		\$0.00	
18			Water and sewer	\$8.00	\$8.00	\$0.00	Sporting events		\$0.00	
19			Cable	\$34.00	\$34.00	\$0.00	Live theater		\$0.00	
20			Waste removal	\$10.00	\$10.00	\$0.00	Other		\$0.00	
21			Maintenance or repairs	\$23.00	\$0.00	\$23.00	Other		\$0.00	
22			Supplies	\$0.00	\$0.00	\$0.00	Other		\$0.00	
23			Other	\$0.00	\$0.00	\$0.00	Subtotal		\$0.00	
24			Subtotal			-\$41.00				
25		TRANSPORTATION				LOANS				
26			Projected Cost	Actual Cost	Difference		Projected Cost	Actual Cost	Difference	
27			Vehicle payment		\$0.00	Personal			\$0.00	
28			Bus/taxi fare		\$0.00	Student			\$0.00	
29			Insurance		\$0.00	Credit card			\$0.00	
30			Licensing		\$0.00	Credit card			\$0.00	
						Credit card			\$0.00	

Estimating fixed income

FERS annuity

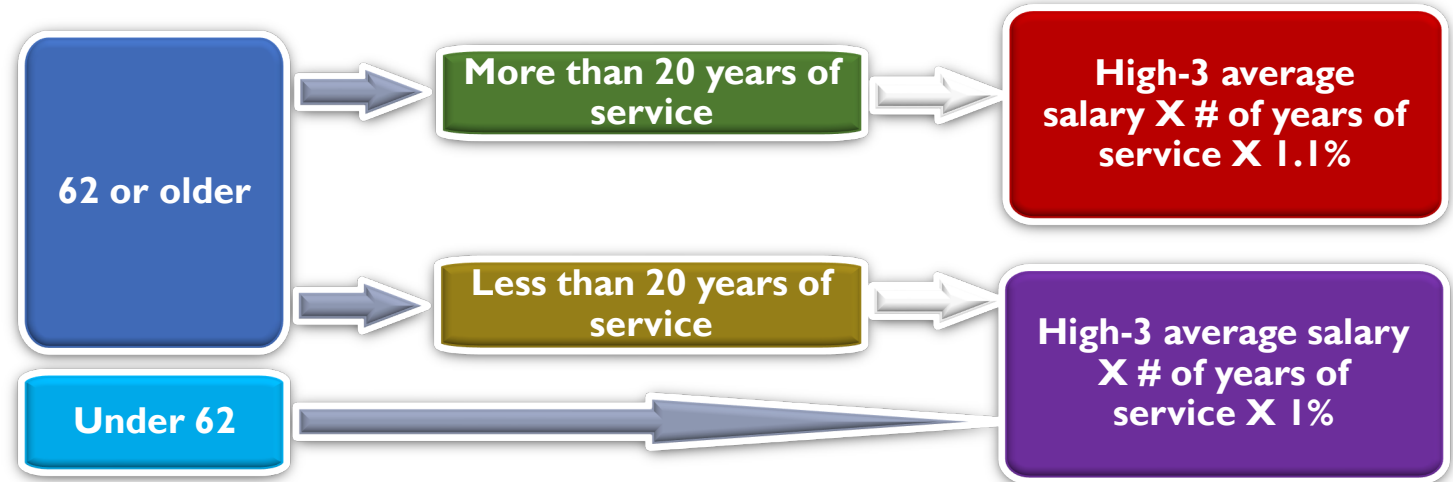


Thrift Savings Plan

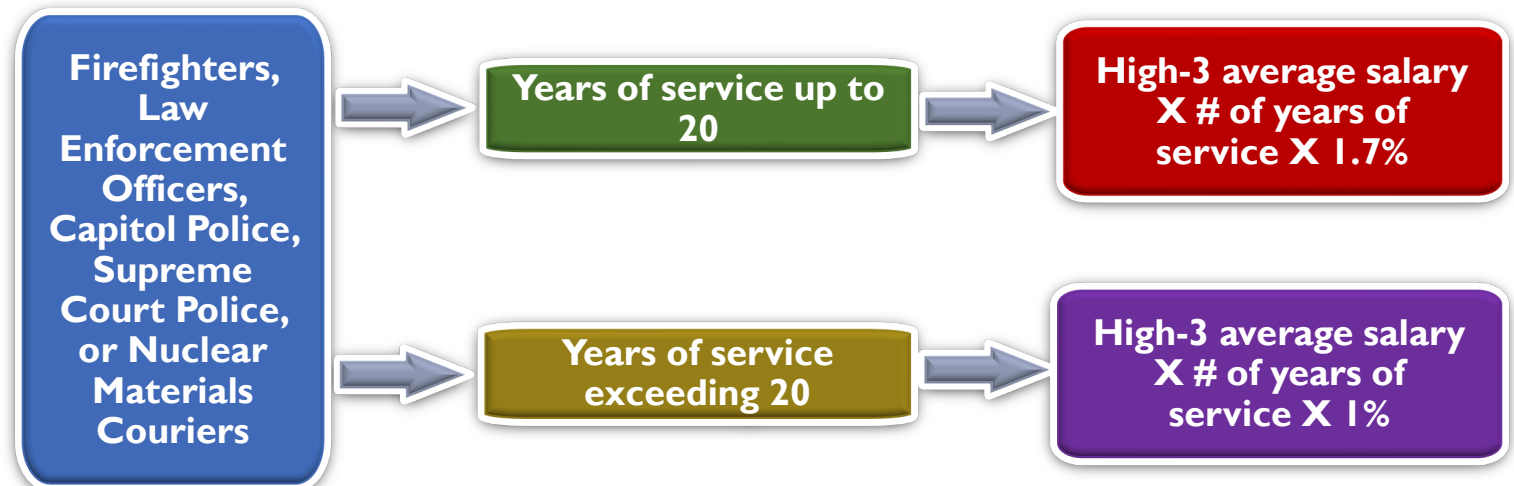
FERS basic annuity computation

Basic annuity is computed based on the highest average basic pay earned during any 3 consecutive years of service

Non-Disability Retirements



Special Provision Retirements



Department/Agency Benefits Platforms - GRB

GRB Platform

MENU

TOTAL COMPENSATION STATEMENT

Retirement

The Federal Employees Retirement System (FERS) is a defined benefit, contributory retirement system. Both the employee and the employing Agency each contribute to a retirement fund from which benefits are paid. Retirement, disability, and/or survivor benefits are paid as a lifetime annuity. To qualify for an annuity, the employee must meet certain age and length of service requirements depending on the type of benefit. In general, the amount of the annuity is based on the total years and months of creditable service the employee has performed and an average of the employee's highest three consecutive years of salary. The exact computation of benefits can depend on a number of other factors including types of service performed, age, insurance elections, and survivor elections. Benefits are not automatic, and the employee must apply for them once eligible. Applications for benefits are submitted to the employing Agency and are adjudicated and paid by the Office of Personnel Management (OPM).

Current Information

Retirement Coverage:	FERS-RAE (KR)
Employee Contribution Rate:	3.10 %
Service Computation Date:	10/27/2012
LEO/FF/ATC SCD:	N/A
Congressional SCD:	N/A
Estimated High-3:	\$68,589.67

Estimated Monthly Retirement Benefits

Retirement Date	Age	Type	Annuity (No Survivor)	Annuity (Max Survivor)	Max Survivor Benefit	Annuity Supplement
10/26/2037	46yrs 8mos	Early/DSR	\$1,428.96	\$1,286.06	\$714.00	\$994.00
N/A	N/A	MRA+10	N/A	N/A	N/A	N/A
01/27/2048	57yrs 0mos	Unreduced	\$2,014.83	\$1,813.35	\$1,007.00	\$1,409.00
09/30/2019	28yrs 8mos	Disability	\$2,286.33	\$2,057.00	\$1,265.00	N/A
09/30/2019	28yrs 8mos	Death	N/A	N/A	\$0.00	N/A

[Retirement Calculator](#) [High-3 Calculator](#) [Severance/VSIP Calculator](#)

In the event you have part-time service, unpaid civilian deposits/redeposits, or unpaid Military deposits the Estimated Benefits displayed may be significantly overstated. The estimated High-3 is based on 97 % of your current salary. The estimated Annuity Supplement uses a salary model rather than your actual salary history, therefore the amount may be overstated or understated.

Retirement Application Package

Currently, the first date you are eligible to retire voluntarily is: 01/27/2048

Retirement Dashboard +

Resources

Type	Description
<input checked="" type="checkbox"/>	Retirement for FERS Employees
<input checked="" type="checkbox"/>	Retirement for FERS Special Group Employees
<input checked="" type="checkbox"/>	Retirement for FERS Congressional Employees
<input checked="" type="checkbox"/>	Financial Planning
<input checked="" type="checkbox"/>	New Employee Benefits Orientation

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Department/Agency Benefits Platforms - EEX

Section H

Your Estimated Gross with Basic Immediate Annuity

- a. Does not include your TSP Annuity, FERS Supplemental Annuity or Social Security Benefit.
- b. Calculations are in today's dollars, including scheduled step increases and currently accrued sick leave. Does not include annual comparability increases.
- c. Hi-3 Avg. Salary is usually based on your last 3 years of salary history or your current salary.
- d. Must have at least five years of federal civilian service to meet the requirement for retirement, not including time from Military Service Buyback. Contact your Human Resources Office for more information.

Enter your own Optional Unreduced Date:

----- Estimated Annuity -----

Date	Est. Hi-3 Avg. Salary	Without Survivorship (Yearly / Monthly)		With Max. Survivorship (Yearly / Monthly)		Annuity To Survivor (Yearly / Monthly)	Retirement Type
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Optional Unreduced (Earliest Date)
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Optional Unreduced (User date)
N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	Optional Reduced (FERS Only)
N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	Voluntary Early or Discontinued (Earliest Date) (Early Ret. requires authority)
N/A	N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	Disability (Amount will be reduced by your Social Security Disability Benefit, if any.)

Amount You Contribute To Your Annuity Annually

Amount Gov't Contributes To Your Annuity Annually

Yes, except Optional Reduced Retirement

Eligible for FERS Supplemental Annuity At Min. Retirement Age (MRA) Through Age 62?

Approximates amount of projected Social Security benefit earned under FERS

Amount of FERS Supplemental Annuity if Between MRA and Age 62. (See Your Benefits Specialist).

If Terminally Ill (life expectancy < 2 years)

Eligible for "Lump Sum" Alternate Form of Annuity?



FERS annuity deductions - Taxes

Federal taxes

Your FERS pension annuity is ordinary income and subject to federal income tax based on your marginal tax rate.

Tax tables are set into law by the United States Congress and administered by the IRS.

OPM must withhold for Federal income taxes based on their methods (see: [Publication 15-T \(2023\) Federal Income Tax Withholding Methods](#))

You can change your tax withholding amount at any time

State taxes

You must specify the dollar amount of state tax you want withheld from your monthly payments.

Eight states – Alaska, Florida, Nevada, South Dakota, Tennessee, Texas, Washington and Wyoming – don't tax wages, salaries, dividends, interest or any sort of income.

Six more states – Alabama, Hawaii, Illinois, Mississippi, New Hampshire, and Pennsylvania don't tax pension income.



Tax table for Single filers – 2023*

Tax rate	Taxable income bracket	Taxes owed
10%	\$0 to \$11,000	10% of taxable income
12%	\$11,001 to \$44,725	\$1,100 plus 12% of the amount over \$11,000
22%	\$44,726 to \$95,375	\$5,147 plus 22% of the amount over \$44,725
24%	\$95,376 to \$182,100	\$16,290 plus 24% of the amount over \$95,375
32%	\$182,101 to \$231,250	\$37,610.4 plus 32% of the amount over \$182,100
35%	\$231,251 to \$578,125	\$52,832 plus 35% of the amount over \$231,250
37%	\$578,126 or more	\$174,238.25 plus 37% of the amount over \$578,125

*The current tax code has been in place since the Tax Cuts and Jobs Act (TCJA) was signed into law in late 2017. Most provisions, including personal income tax rates and brackets, expire at the end of 2025 unless Congress acts.

Tax table for Married, filing joint – 2023*

Tax rate	Taxable income bracket	Tax owed
10%	\$0 to \$22,000	10% of taxable income
12%	\$22,001 to \$89,450	\$2,200 plus 12% of the amount over \$22,000
22%	\$89,451 to \$190,750	\$10,294 plus 22% of the amount over \$89,450
24%	\$190,751 to \$364,200	\$32,580 plus 24% of the amount over \$190,750
32%	\$364,201 to \$462,500	\$74,208 plus 32% of the amount over \$364,200
35%	\$462,501 to \$693,750	\$105,664 plus 35% of the amount over \$462,500
37%	\$693,751 or more	\$186,601.50 plus 37% of the amount over \$693,750

*The current tax code has been in place since the Tax Cuts and Jobs Act (TCJA) was signed into law in late 2017. Most provisions, including personal income tax rates and brackets, expire at the end of 2025 unless Congress acts.

FERS annuity deductions (other)

Survivor Benefits	Maximum Survivor Annuity = 10% reduction; upon your death, spouse receives 50% of the unreduced earned annuity
	Partial Survivor Annuity = 5%., reduction; upon your death, spouse receives 25% of the rate of the unreduced self-only annuity
	No Survivor Annuity = no reduction and upon your death, no survivor annuity will be paid to spouse
Federal Employee Health Benefits Plan (FEHB)	Premiums remain the same in retirement except you will pay taxes on them
	May appear different since retirement annuity is paid monthly as opposed to bi-weekly, etc.
Federal Employee Life Insurance (FEGLI)	If eligible, you may choose to continue coverage and pay the premiums but you are not required to do so
	You can cancel or decrease your coverage at any time

Estimating fixed income

Estimating Social Security Retirement Benefits



Thrift Savings Plan

Access your Social Security retirement benefit details



[Home](#) > [Prepare](#) > Plan for retirement

Prepare

Check eligibility for benefits

Plan for retirement

Review record of earnings

Apply

Manage benefits

Plan for retirement

Apply for your monthly retirement benefit any time between age 62 and 70. We calculate your payment by looking at how much you've earned throughout your life. The amount will be higher the longer you wait to apply, up until age 70. The timing is up to you and should be based on your own personal needs.



Get an estimate

Check your Social Security account to see how much you'll get when you apply at different times between age 62 and 70.

[Sign in](#)

[Create account](#)



Your Social Security Statement

You can download your statement as a PDF or XML file.



Thrift Savings Plan

Sample Social Security Statement on SSA.gov



Your Social Security Statement

WANDA WORKER

October 2, 2021

Retirement Benefits

You have earned enough credits to qualify for retirement benefits. To qualify for benefits, you earn "credits" through your work — up to four each year. Your full retirement age is **67**, based on your date of birth: April 10, 1960. As shown in the chart, you can start your benefits at any time between ages 62 and 70. **For each month you wait to start your benefits, your monthly benefit will be higher—for the rest of your life.**

These personalized estimates are based on your earnings to date and assume you continue to earn \$50,653 per year until you start your benefits. To learn more about retirement benefits, visit ssa.gov/benefits/retirement/learn.html.

Disability Benefits

You have earned enough credits to qualify for disability benefits. If you became disabled right now, your monthly payment would be about **\$1,656 a month**.

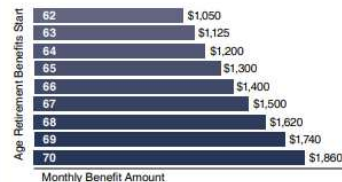
Survivors Benefits

You have earned enough credits for your eligible family members to receive survivors benefits. If you die this year, members of your family who may qualify for monthly benefits include:

Minor child:	\$2,129
Spouse, if caring for a disabled child or child younger than age 16:	\$2,129
Spouse, if benefits start at full retirement age:	\$2,838
Total family benefits cannot be more than:	\$4,968
Your spouse or minor child may be eligible for an additional one-time death benefit of \$255.	

We base benefit estimates on current law, which Congress has revised before and may revise again to address needed changes. Learn more about Social Security's future at ssa.gov/ThereForMe.

Personalized Monthly Retirement Benefit Estimates (Depending on the Age You Start)



Medicare

You have enough credits to qualify for Medicare at age 65. Medicare is the federal health insurance program for:

- people age 65 and older,
- under 65 with certain disabilities, and
- people of any age with End-Stage Renal Disease (ESRD) (permanent kidney failure requiring dialysis or a kidney transplant).

Even if you do not retire at age 65, you may need to sign up for Medicare within 3 months of your 65th birthday to **avoid a lifetime late enrollment penalty**. Special rules may apply if you are covered by certain group health plans through work.

For more information about Medicare, visit medicare.gov or ssa.gov/medicare or call 1-800-MEDICARE (1-800-633-4227) (TTY 1-877-486-2048).

Earnings Record

Review your earnings history below to ensure it is accurate. This is important because we base your future benefits on our record of your earnings. There's a limit to the amount of earnings you pay Social Security taxes on each year. Earnings above the limit do not appear on your earnings record. We have combined your earlier years of earnings, but you can view them online with [my Social Security](https://my.ssa.gov). If you find an error view your full earnings record online and call 1-800-772-1213.

Work Year	Earnings Taxed for Social Security	Earnings Taxed for Medicare (began 1966)
1937-1950	\$ 13,989	
1951-1965	46,482	
1966-1970	18,236	18,236
1971-1980	20,000	20,000
1981-1990	41,250	41,250
1991-2000	257,712	257,712
2001	34,915	34,915
2002	35,591	35,591
2003	36,717	36,717
2004	38,686	38,686
2005	40,325	40,325
2006	42,315	42,315
2007	44,346	44,346
2008	45,437	45,437
2009	44,784	44,784
2010	45,847	45,847
2011	47,146	47,146
2012	48,349	48,349
2013	48,606	48,606
2014	49,860	49,860
2015	50,850	50,850
2016	50,158	50,158
2017	50,440	50,440
2018	50,653	50,653
2019	Not yet recorded	

Taxes Paid

Total estimated Social Security and Medicare taxes paid over your working career based on your Earnings Record:

Social Security taxes	Medicare taxes
You paid: \$34,288	You paid: \$19,396
Employer(s): \$36,003	Employer(s): \$19,396

Earnings Not Covered by Social Security

You may also have earnings from work not covered by Social Security. This work may have been for federal, state, or local government or in a foreign country. If you participate in a retirement plan or receive a pension based on work for which you did not pay Social Security tax, it could lower your benefits. To find out more, visit ssa.gov/gpo-wep.

Important Things to Know about Your Social Security Benefits

- Social Security benefits are not intended to be your only source of retirement income. You may need other savings, investments, pensions, or retirement accounts to make sure you have enough money when you retire.
- You need at least 10 years of work (40 credits) to qualify for retirement benefits. Your benefit amount is based on your highest 35 years of earnings. If you have fewer than 35 years of earnings, years without work count as 0 and may reduce your benefit amount.
- We use cost of living adjustments so your benefits will keep up with inflation.
- The age you claim benefits will affect the benefit amount for your surviving spouse.
- If you get retirement or disability benefits, your spouse and children also may qualify for benefits.
- If you are divorced and were married for 10 years, you may be able to claim benefits on your ex-spouse's record. If your divorced spouse receives benefits on your record, that does not affect your or your current spouse's benefit amounts.
- When you apply for either retirement or spousal benefits, you may be required to apply for the other benefit as well.
- For more information about benefits for you and your family, visit ssa.gov/benefits/retirement/planner/applying7.html.
- When you are ready to apply, visit us at ssa.gov/benefits/retirement/apply.html.
- The *Statement* is updated annually. It is available upon request, either online or by mail.

SSA.gov | Follow us on social media ssa.gov/socialmedia

Form SSA-7005-SM-OL (05/21)

SSA.gov – Benefit calculators



Social Security

Benefits ▾ Medicare ▾ Card & record ▾

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Benefit Calculators - Estimate Your Benefit

Office of the Chief Actuary

my Social Security Retirement Estimate

Compare retirement benefit estimates based on your selected date or age to begin receiving benefits with retirement estimates for ages 62, Full Retirement Age (FRA), and 70. You can also input expected future income for inclusion in the estimate.

Other calculators, listed below, are less restrictive but require you to enter your earnings.

Quick Calculator (Aquí en Español)

Provides rough estimates of your retirement benefit based on your current earnings. Also provides estimated disability and survivor benefits if you die or become disabled today.

Online Calculator (Aquí en Español)


To use the Online Calculator, you must have a copy of your earnings record because you will need to enter your covered earnings for each year. This calculator is more accurate than the Quick Calculator. (The Online Calculator requires that your browser be JavaScript-enabled.)


A special-purpose version of the Online Calculator provides benefit estimates under the Windfall Elimination Provision (WEP) for those who receive a pension from work not covered by Social Security. None of the calculators listed above can provide such benefit estimates.

Detailed Calculator

To use this program, you need to install it on your computer. This program is the most powerful of all the calculators and is capable of computing almost any type of Social Security benefit.

Related information

Helpful Links	Description
When to start benefits  Life expectancy calculator	Advice on when to begin receiving retirement benefits
Effect of early retirement on benefits	If you are under your normal retirement age when you choose to begin receiving benefits, your benefit will be reduced.
Effect of earnings on benefits	If you are under your normal retirement age and you continue to work while receiving benefits, you may be subject to the retirement earnings test. We can show the effect of your earnings on your benefits.
How we compute retirement benefits, Illustrative examples	Basis for retirement benefit computations
Indexing factors	Approximate factors used to adjust earnings for a selected eligibility year



Thrift Savings Plan

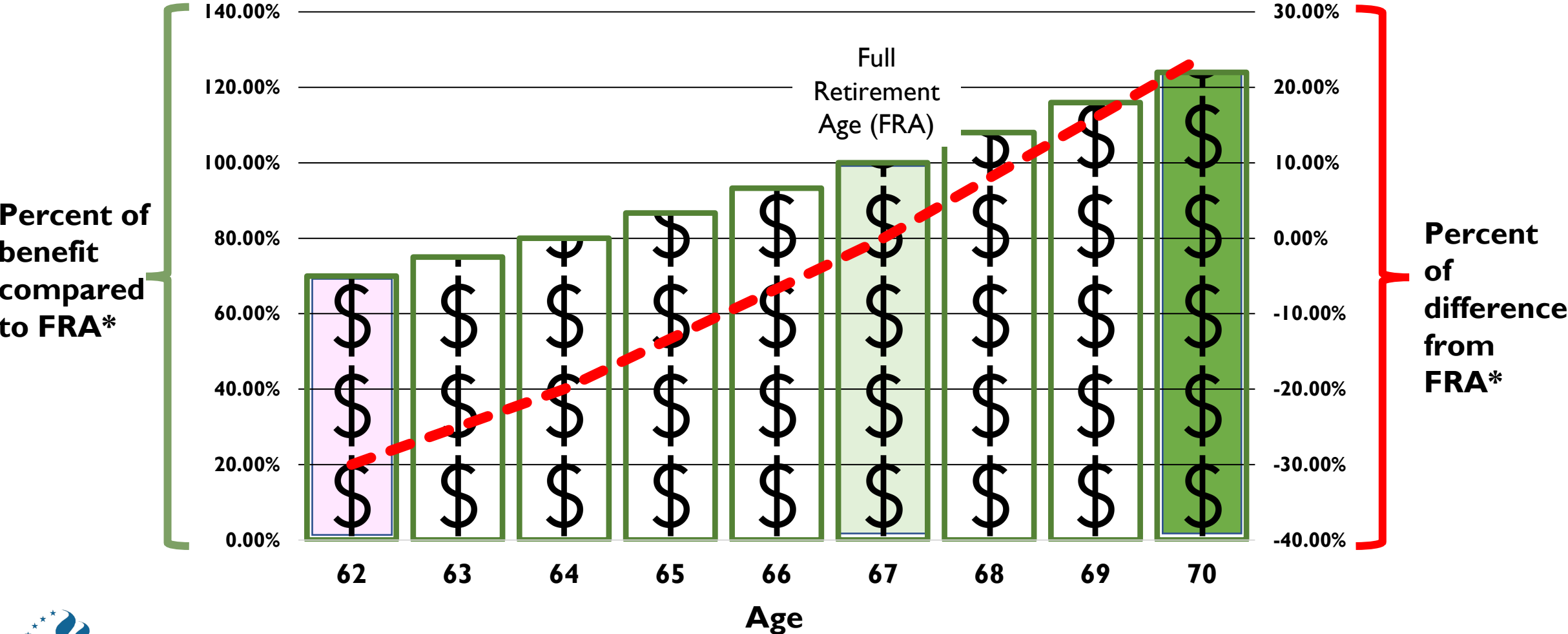
https://www.ssa.gov/OACT/anypia/index.html

Social Security retirement benefit increases as you get older

- You may elect to begin receiving your Social Security retirement benefit as early as age 62 or, you may wait and begin receiving it at any time up until you reach age 70
 - The longer you wait, the more your benefit will increase
 - At your “Full Retirement Age,” (FRA), you:
 - Receive 100% of your benefit, and
 - Your benefit is not subject to a reduction
 - If you were born in 1960 or later, your FRA is 67
 - If your full benefit at age 67 is \$1,000, your benefit if you begin receiving it at age:
 - 62 is 30% less, or \$700,
 - 70 is 24% more, or \$1,240



How much Social Security benefit changes based on age



Taxes on Social Security retirement benefits (as of tax year 2022)

Filing as:	If your combined income is between:	You will pay taxes on up to:	If your combined income is more than:	You will pay taxes on up to:
Single	\$25,000 and \$34,000	50%	\$34,000	85%
Married	\$32,000 and \$44,000	50%	\$44,000	85%

- Thirty-seven states and D.C. either have no income tax:
AK, FL, NV, SD, TN, TX, WA, WY or,
- Do not include Social Security benefits in their calculation for taxable income:
AL, AZ, AR, CA, DE, DC, GA, HI, ID, IL, IN, IA, KY, LA, ME, MD, MA, MI, MS,
NH, NJ, NY, NC, OH, OK, OR, PA, SC, VA, WI



Estimating income from the Thrift Saving Plan



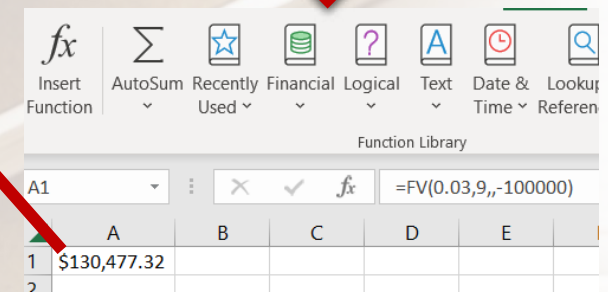
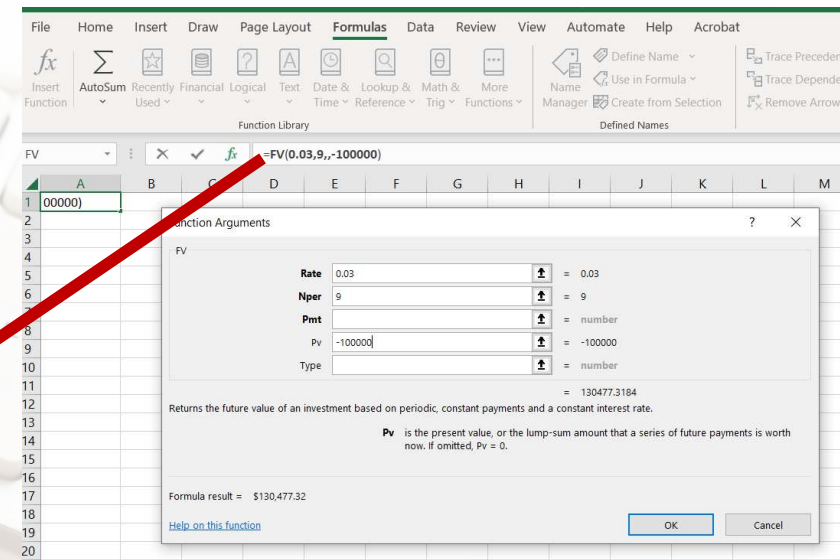
How much will Mary's TSP monthly installment payments need to be in her first year of retirement?

- Mary is a 56-year-old Federal employee and has 21 years of covered FERS service
- Her salary with locality pay is \$100,000
- She wants to retire at age 65
- She wants her total retirement income to be based on 75% of her final years' gross salary*

*Using a “replacement ratio” like this is less accurate than using numbers based on an actual cash flow analysis. This calculation ignores any spouse income either pre or post retirement.

Mary's projected income need (first year of retirement)

- Final years' gross salary
 - Using Excel "Future Value formula:
 $=FV(0.03,9,,-100000)$ \$130,477
- Total income needed first year in retirement
 $\$130,477 \times .75 = \$97,858$
 $\$97,858 \div 12 = \$8,155$



Mary projects she will need a total of **\$8,155** gross income each month during her first year of retirement...



Mary's retirement income projections

FERS annuity

- Years of FERS service: 30 years
- Multiplier for age 62 or older with 20 or more years of service: 1.1%
- High-3: approximately \$130,000
- $30 \times .011 \times \$130,000 = \$42,900$
- Subtract 10% or survivor annuity (-\$4,900)
- $\$42,900 - \$4,900 = \$38,610$
- $\$38,610 \div 12 = \$3,217/\text{monthly}$

Social Security retirement*

- DOB: 6/1966 and current gross salary: \$100,000
- **If benefits begin in 2031 at age 65: \$2,317/monthly**

TSP monthly installment required to reach 75% replacement rate
 $\$8,115 - (\$3,217 + \$2,317) =$
\$2,620/monthly

$$\$3,217 + \$2,317 + 2,620 = \underline{\underline{\$8,154}}$$

*SSA.gov Quick Calculator estimate

<https://www.ssa.gov/OACT/quickcalc/>

<https://www.opm.gov/retirement-services/fers-information/computation/>



Thrift Savings Plan

Very flexible distribution options from your TSP account

You can:

- Take distributions from Traditional or Roth balances separately
 - Plan a strategy to mitigate the Federal income taxes you must pay
- Use TSP's flexible options to meet your unique financial situation
 - Take partial distributions when needed separate from regular installments
 - Make changes to installment payments (increase, decrease, stop, restart, etc.)
- Use a portion* of your account balance to purchase a TSP Life Annuity to mitigate the risk of running out of money as you age

[TSP Annuities Fact Sheet](#)

[TSP Distributions booklet](#)

TSP Life Annuity

Another distribution option








Thrift Savings Plan

TSP Life Annuity – what is it?

- A contract between TSP participant and the Thrift Savings Plan's annuity provider, Met Life
 - In exchange for the premium (purchase price), Met Life provides monthly income to the participant for the rest of their life. And, in the case of a joint annuity, to the last to die.



The amount of the payments depend upon:

-  Amount of the premium
-  Annuity interest rate index
-  Age of the annuitant(s)
-  Type of annuity
-  Whether a pre-mature death mitigation feature is added and if so, which one

TSP Life Annuity pros & cons



- Eliminates longevity risk
- Payments not subject to market risk
- Can increase returns beyond those of other options
- No account management or account maintenance charges
- Option for level or increasing payments
- Option of “death payment” to beneficiary if death is premature



- Loss of liquidity
 - Decision is irrevocable
- Loss of purchasing power
 - Level payments aren't adjusted for inflation
- If death is premature, total payout could be less than the premium paid if 10-year certain or cash refund feature wasn't chosen
- Possibly smaller death benefit for beneficiaries of TSP account



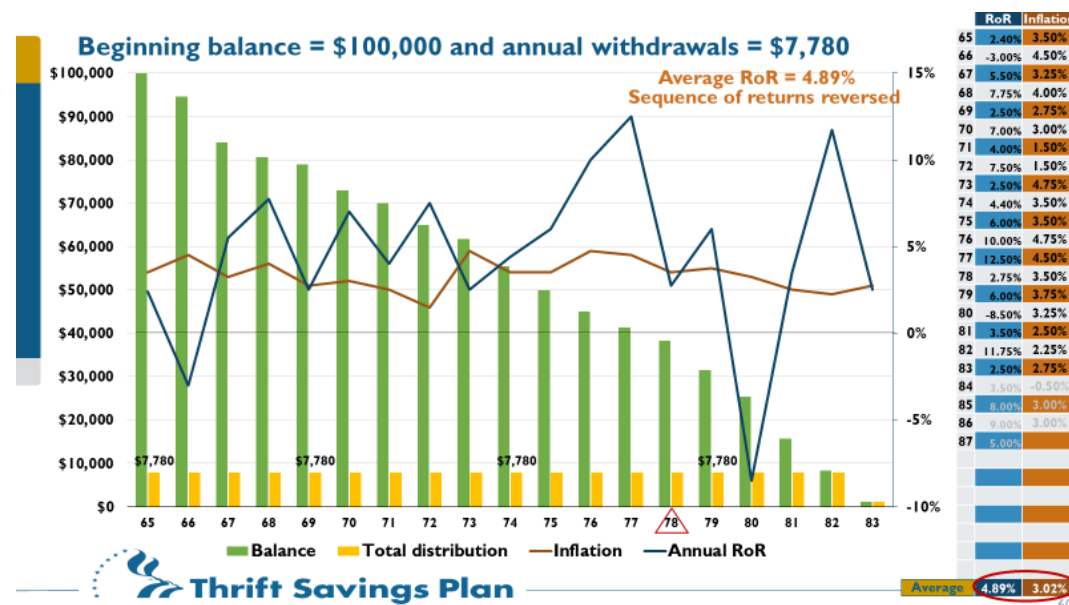
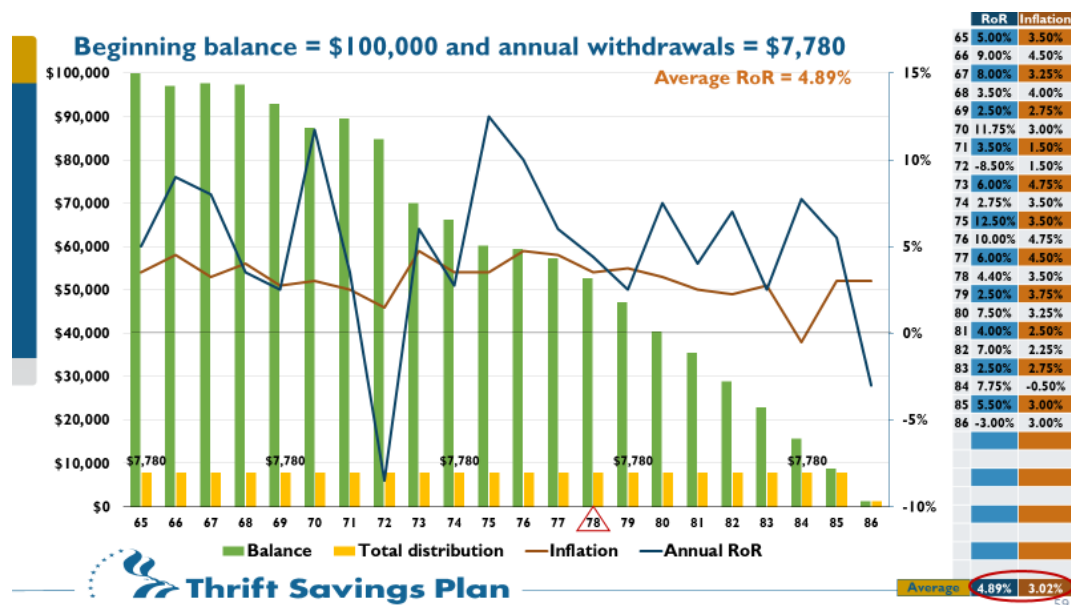
Annuity payout rate

- The annual payout rate is the amount you will receive each year for the rest of your life divided by the premium you paid:
 - If the premium was \$100,000 and the payout is \$649 per month (\$7,784 for the year) then, $\$7,784 \div \$100,000 = 7.78\%$
 - You would be receiving \$7,780/year for the rest of your life, so...

If you had a TSP balance of \$100,000, and took withdrawals of exactly \$649/month (total of \$7,780/year), how long would your TSP account last?

Scenario I:

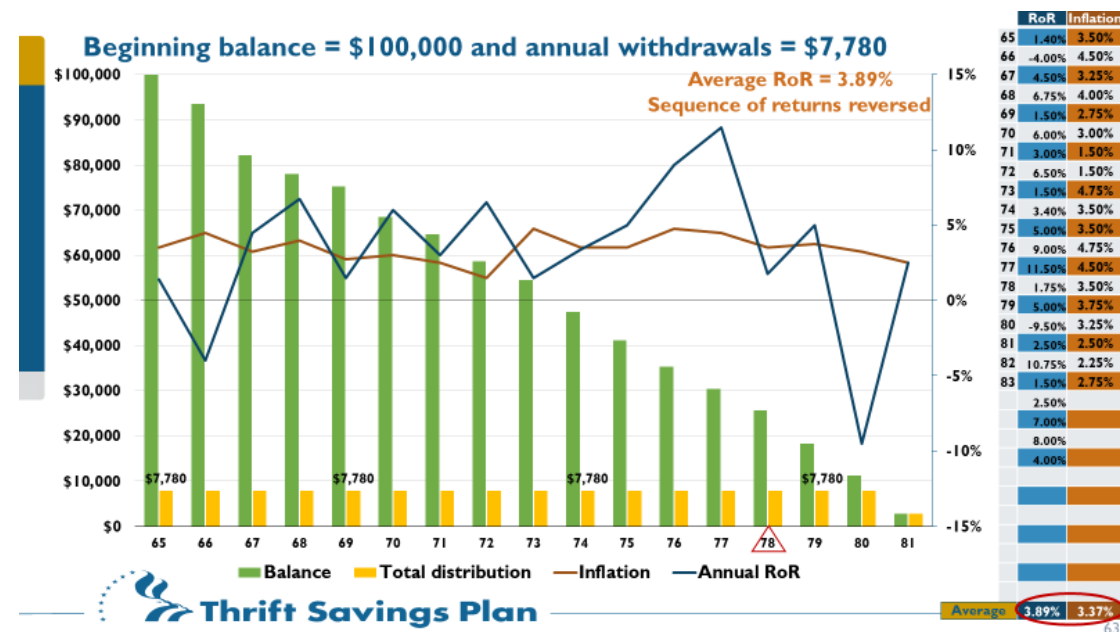
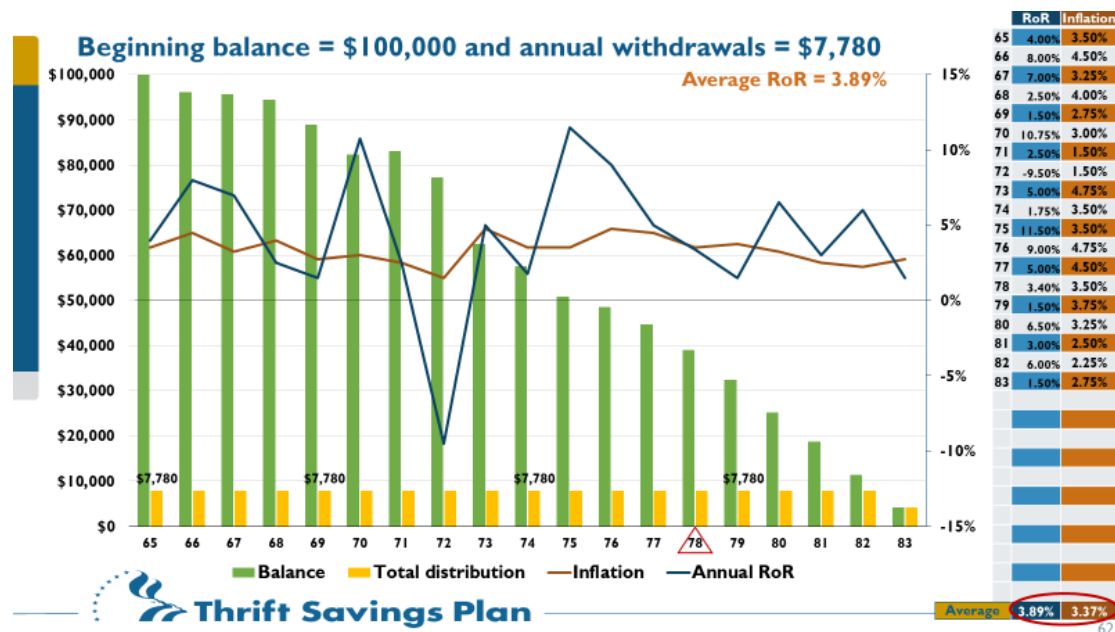
Scenario I: Average inflation = 3.02% and A) average Rate of Return = 4.89% and, B) average Rate of Return = 4.89% with sequence of returns reversed.



If you had a TSP balance of \$100,000, and took withdrawals of exactly \$649/month (total of \$7,780/year), how long would your TSP account last?

Scenario 2:

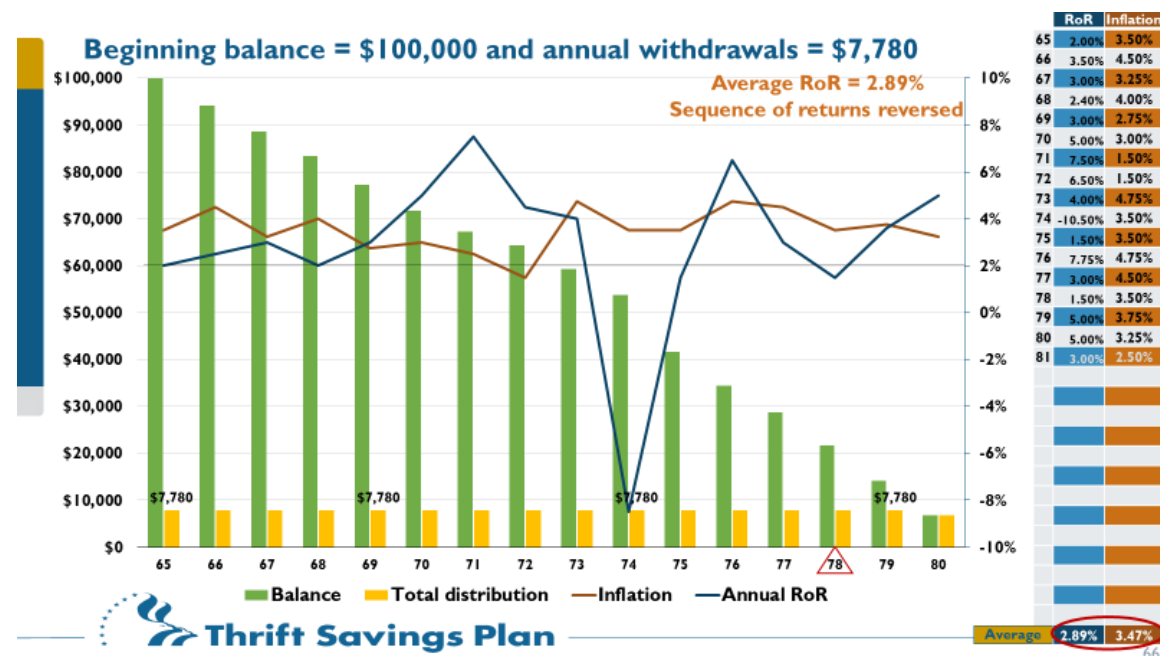
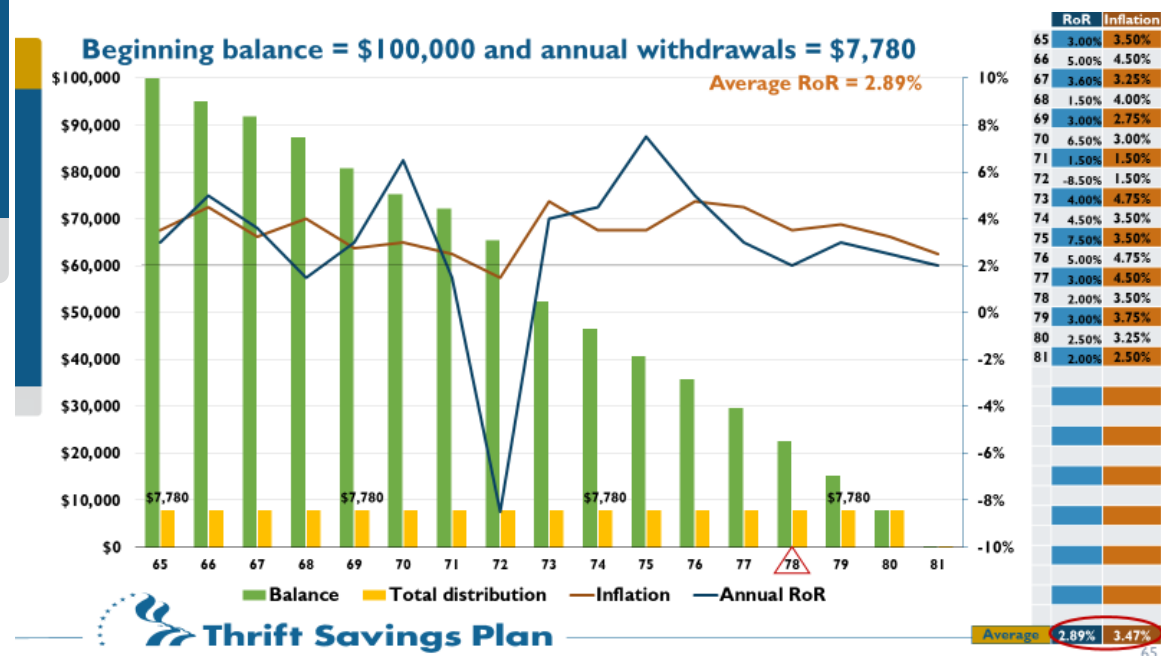
Average inflation = 3.37% and A) average Rate of Return = 3.89% and, B) average Rate of Return = 3.89% with sequence of returns reversed.



If you had a TSP balance of \$100,000, and took withdrawals of exactly \$649/month (total of \$7,780/year), how long would your TSP account last?

Scenario 3:

Scenario 1: Average inflation = 3.47% and A) average Rate of Return = 2.89% and, B) average Rate of Return = 2.89% with sequence of returns reversed.



ESTIMATED TSP Annuity Payout Rates based on a Single Life Annuity with level payments, no cash refund, no 10-yr certain option and a premium of \$100,000 as of September 2023

Monthly payments are calculated using the Payment and Annuity calculator based on an annuity interest rate index of 4.45*

Age	Monthly payment	Annual payment	Payout rate	Age to break even
60	\$600	\$7,200	7.20%	73.89
65	\$665	\$7,979	7.98%	77.53
70	\$751	\$9,014	9.01%	81.09
75	\$883	\$10,600	10.60%	84.43
80	\$1,094	\$13,123	13.12%	87.62
85	\$1,434	\$17,204	17.20%	90.81

These are **ONLY ESTIMATES**. Actual projected annuity payments MUST BE CONFIRMED through TSP at the time of purchase.

Estimating TSP Life Annuity payments on TSP.gov

- Log into your account and go to the “Retirement Income Modeler”
- Select the “TSP Distributions” tab
 - Check “Annuity Purchase”
 - Indicate payment start date
 - Indicate amount of balance to use toward annuity purchase
 - Indicate type of annuity and features (if any)
 - See monthly payment amount above tabs

About You TSP Balance Other Retirement Income **TSP Distributions**

[Learn more about the assumptions used for these calculations.](#)

Which payments would you like to model?

☐ Installment Payments

☐ Annuity Purchase (Guaranteed Payments)

☐ Single Withdrawal

[Read Disclaimers](#)

CLEAR TSP DISTRIBUTIONS

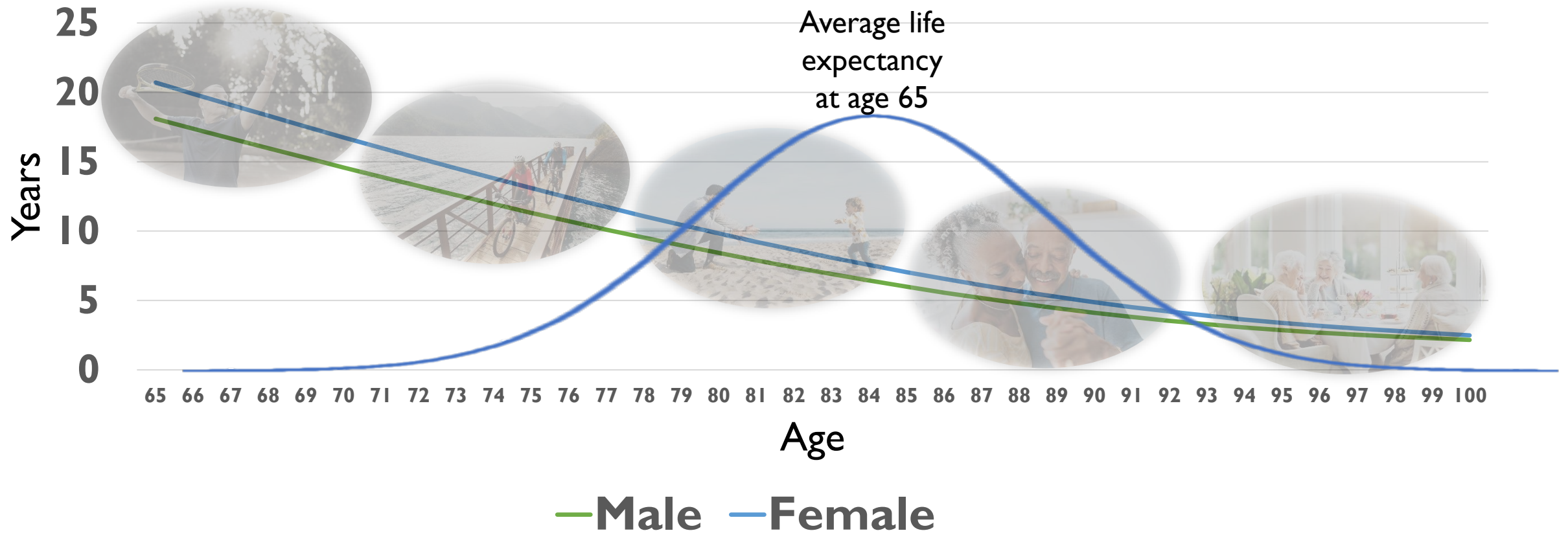
● Social Security Income: \$0 ● TSP Annuity: \$640 ● Other Retirement Income: \$0 ● FERS Basic Benefit Plan (Pension/Annuity): \$0

Retirement income risks

Longevity, market and sequence of returns risk

Longevity

Remaining Life Expectancy (from age 65)*

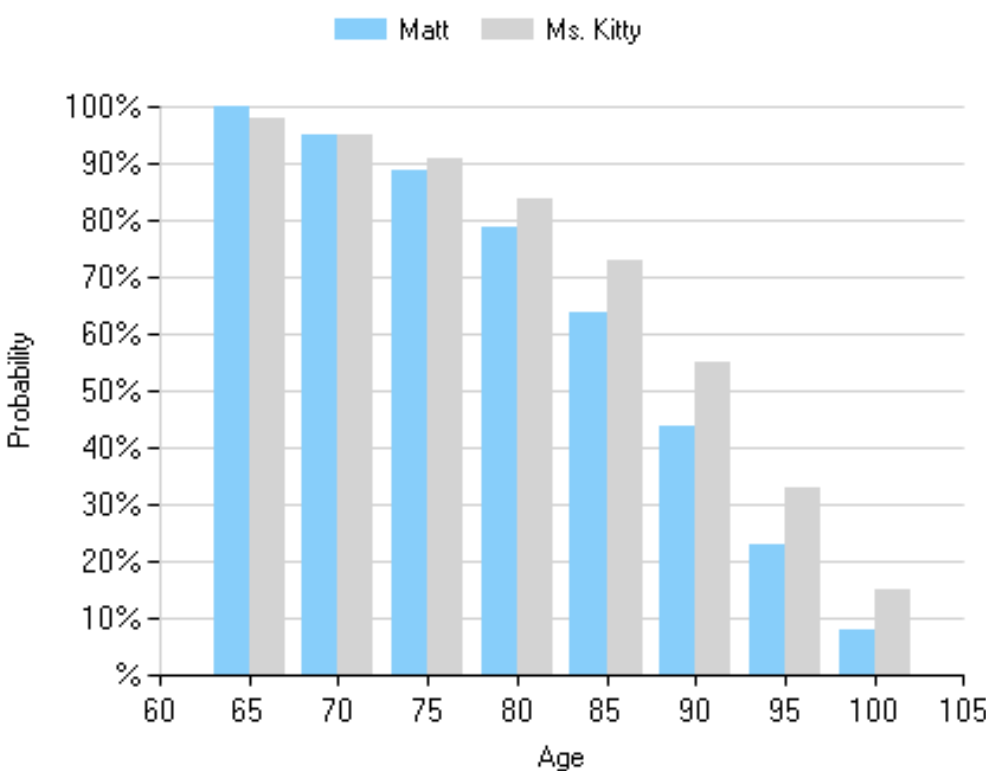


*Based on the 2019 period life table at <https://www.ssa.gov/oact/STATS/table4c6.html#ss>

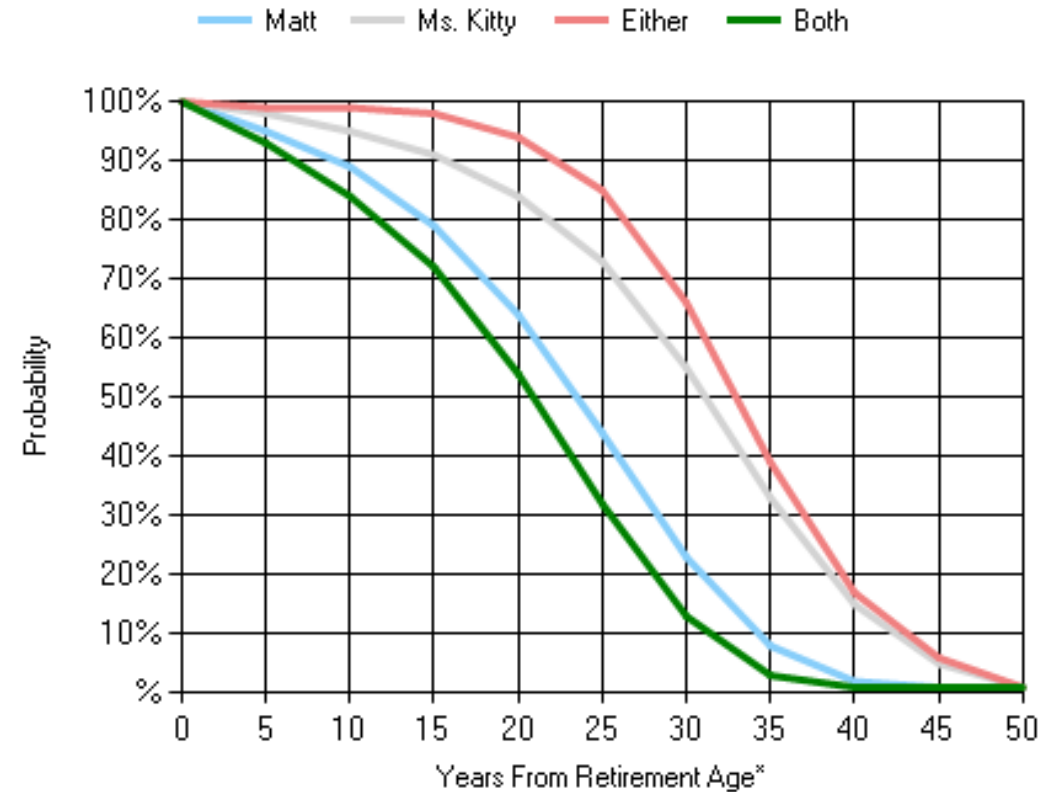
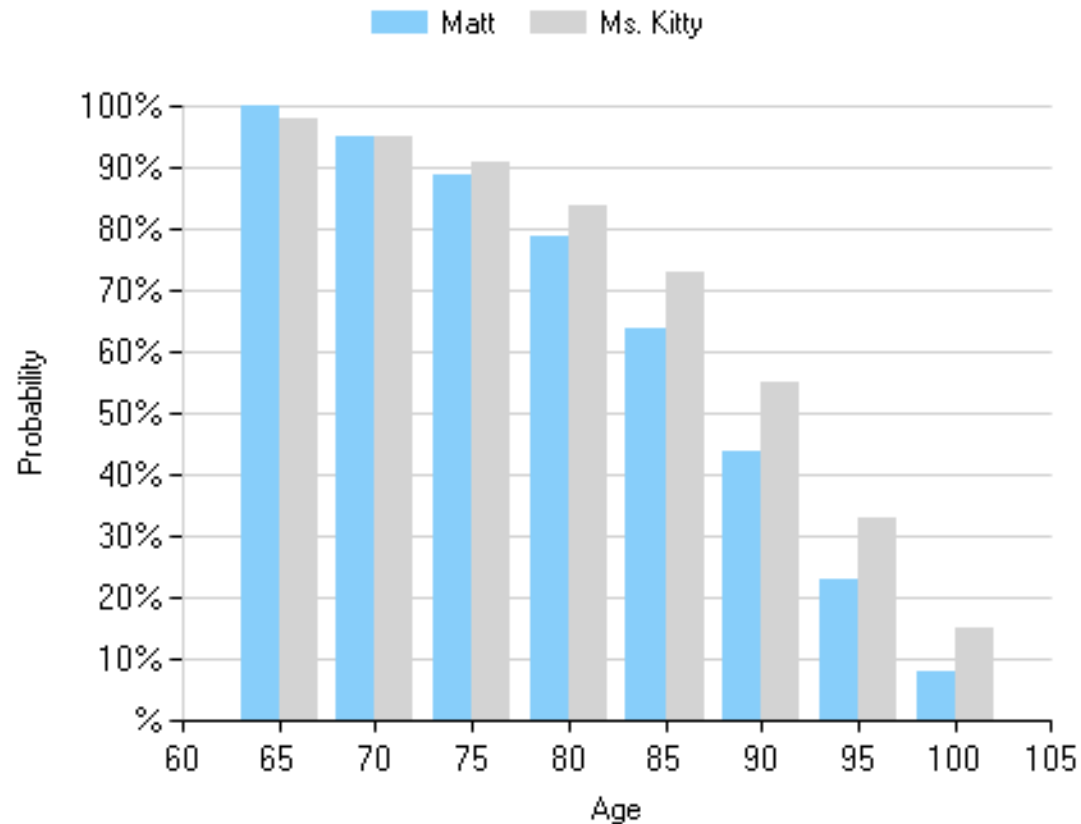
Longevity Illustrator – Matt and Ms. Kitty I

	Matt	Miss Kitty
Date of Birth	1/1/1961	1/1/1966
Nearest Age	62	57
Retirement Age	65	60
Gender	Male	Female
Do You Smoke?	No	No
General Health	Excellent	Excellent

Age	Matt	Ms. Kitty
65	100%	98%
70	95%	95%
75	89%	91%
80	79%	84%
85	64%	73%
90	44%	55%
95	23%	33%
100	8%	15%



Longevity Illustrator – Matt and Ms. Kitty 2



Sequence of
returns doesn't
matter if there
are no
withdrawals

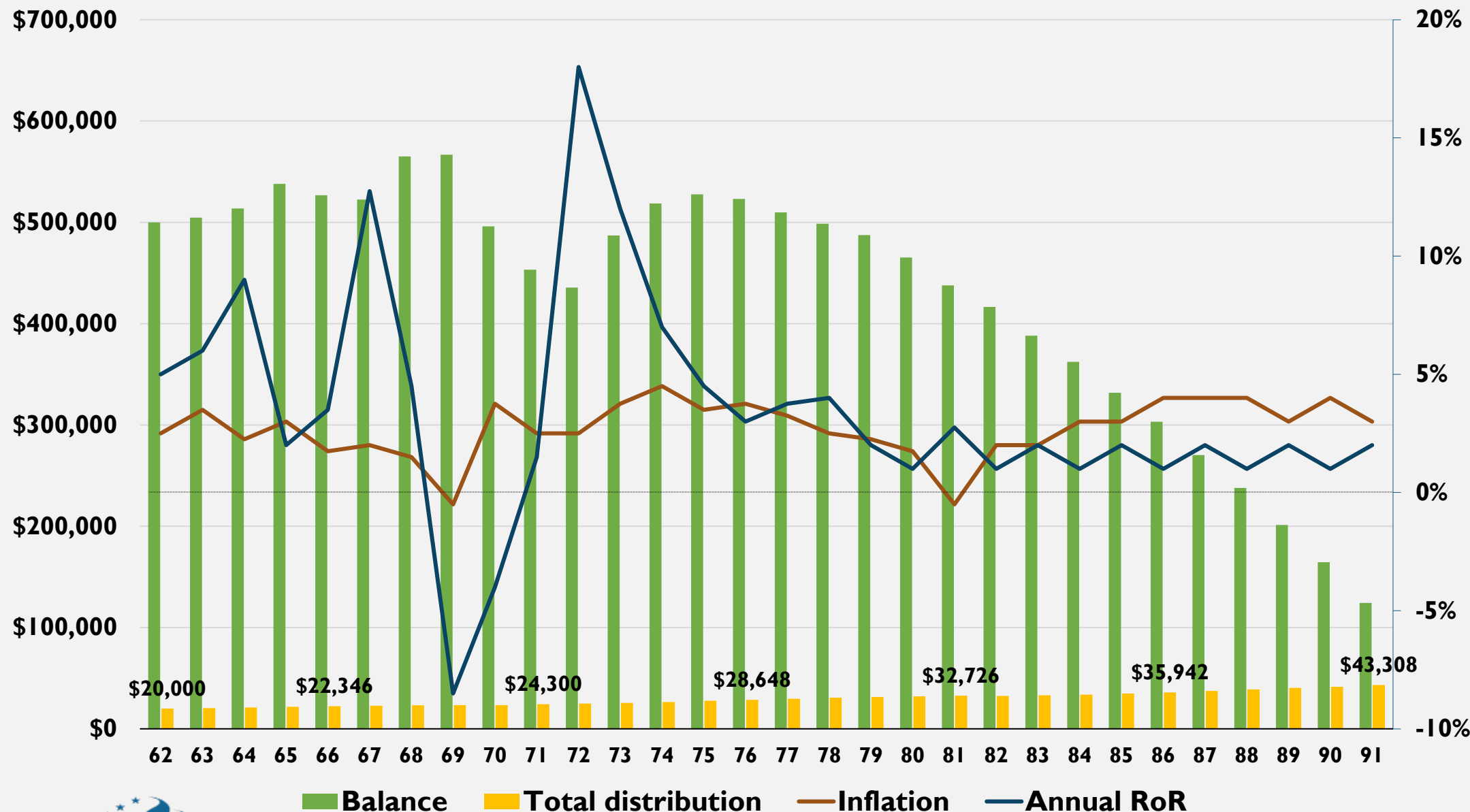
Scenario 1			Scenario 2		
Age	Annual Return	TSP Balance EOY	Age	Annual Return	TSP Balance EOY
62	NA	\$500,000	62	NA	\$500,000
63	6.00%	\$530,000	63	2.00%	\$510,000
64	9.00%	\$577,700	64	1.00%	\$515,100
65	2.00%	\$589,254	65	2.00%	\$525,402
66	3.50%	\$609,878	66	1.00%	\$530,656
67	12.75%	\$687,637	67	2.00%	\$541,269
68	4.50%	\$718,581	68	1.00%	\$546,682
69	-8.50%	\$657,502	69	2.00%	\$557,615
70	-4.00%	\$631,202	70	1.00%	\$563,192
71	1.50%	\$640,670	71	2.00%	\$574,455
72	18.00%	\$755,990	72	1.00%	\$580,200
73	12.00%	\$846,709	73	2.75%	\$596,156
74	7.00%	\$905,979	74	1.00%	\$602,117
75	4.50%	\$946,748	75	2.00%	\$614,159
76	3.00%	\$975,150	76	4.00%	\$638,726
77	3.75%	\$1,011,718	77	3.75%	\$662,678
78	4.00%	\$1,052,187	78	3.00%	\$682,558
79	2.00%	\$1,073,231	79	4.50%	\$713,273
80	1.00%	\$1,083,963	80	7.00%	\$763,203
81	2.75%	\$1,113,772	81	12.00%	\$854,787
82	1.00%	\$1,124,910	82	18.00%	\$1,008,649
83	2.00%	\$1,147,408	83	1.50%	\$1,023,778
84	1.00%	\$1,158,882	84	-4.00%	\$982,827
85	2.00%	\$1,182,059	85	-8.50%	\$899,287
86	1.00%	\$1,193,880	86	4.50%	\$939,755
87	2.00%	\$1,217,758	87	12.75%	\$1,059,573
88	1.00%	\$1,229,935	88	3.50%	\$1,096,659
89	2.00%	\$1,254,534	89	2.00%	\$1,118,592
90	1.00%	\$1,267,079	90	9.00%	\$1,219,265
91	2.00%	\$1,292,421	91	6.00%	\$1,292,421
	3.44%	\$1,292,421		3.44%	\$1,292,421

Sequence
of
returns
reversed

Same

Same

Scenario I incorporating inflation and withdrawals based on 4% rule



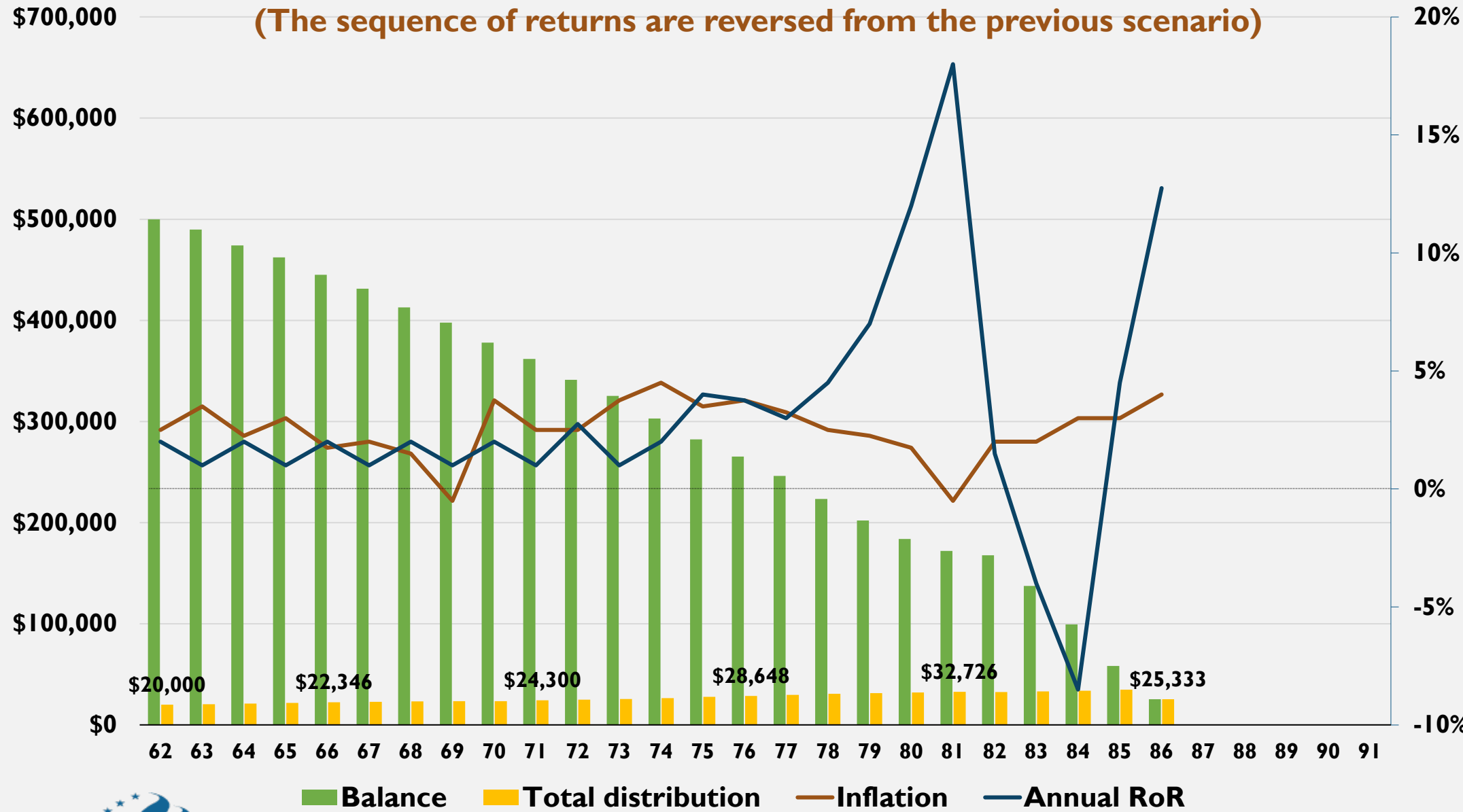
	RoR	Inflation
62	NA	2.50%
63	6.00%	3.50%
64	9.00%	2.25%
65	2.00%	3.00%
66	3.50%	1.75%
67	12.75%	2.00%
68	4.50%	1.50%
69	-8.50%	-0.50%
70	-4.00%	3.75%
71	1.50%	2.50%
72	18.00%	2.50%
73	12.00%	3.75%
74	7.00%	4.50%
75	4.50%	3.50%
76	3.00%	3.75%
77	3.75%	3.25%
78	4.00%	2.50%
79	2.00%	2.25%
80	1.00%	1.75%
81	2.75%	-0.50%
82	1.00%	2.00%
83	2.00%	2.00%
84	1.00%	3.00%
85	2.00%	3.00%
86	1.00%	4.00%
87	2.00%	4.00%
88	1.00%	4.00%
89	2.00%	3.00%
90	1.00%	4.00%
91	2.00%	3.00%
Average	3.44%	2.72%



Thrift Savings Plan

Scenario 2 incorporating inflation and withdrawals based on 4% rule

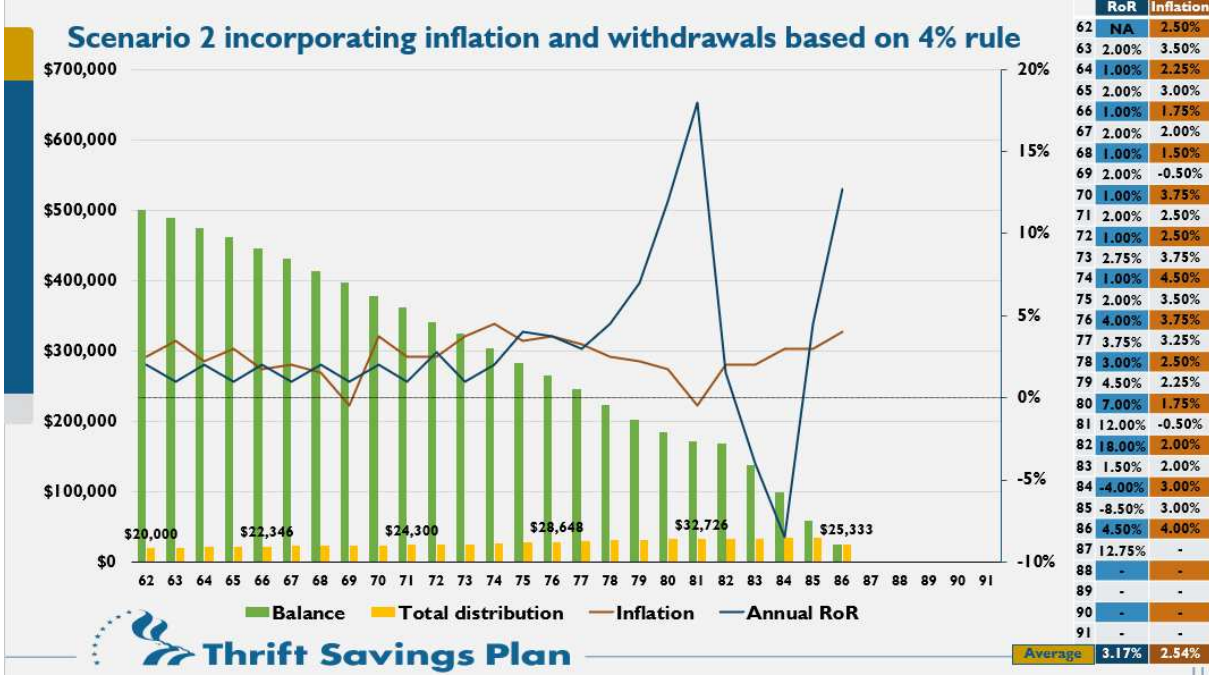
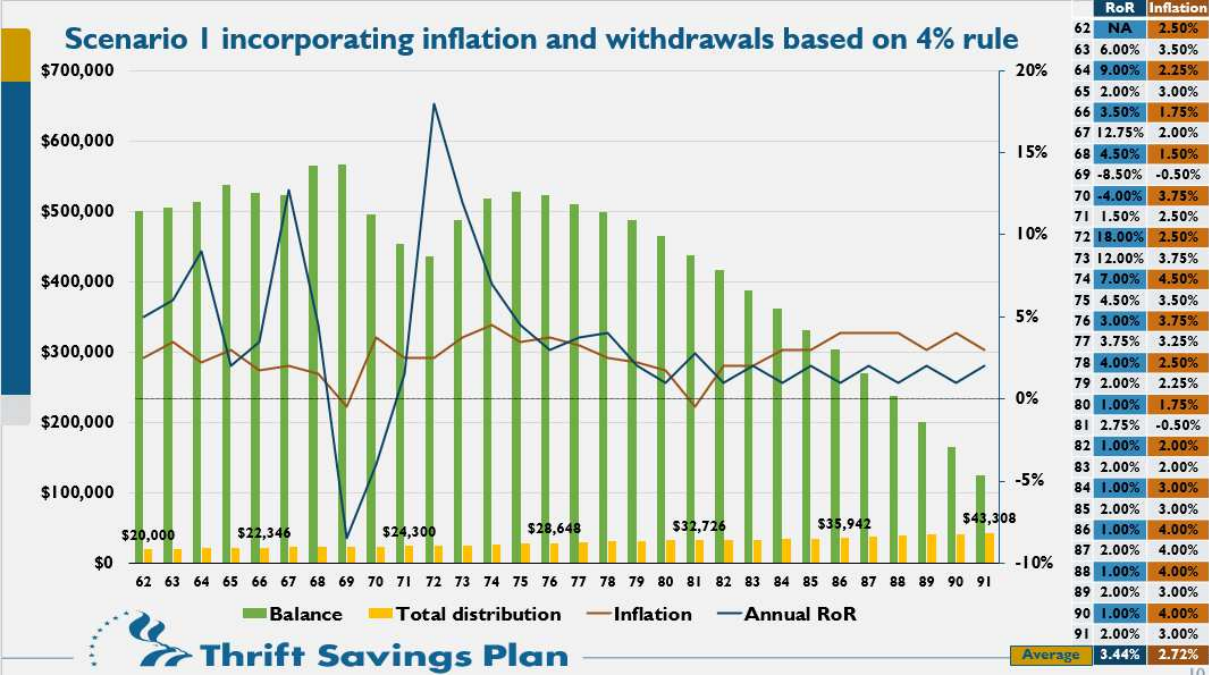
(The sequence of returns are reversed from the previous scenario)



	RoR	Inflation
62	NA	2.50%
63	2.00%	3.50%
64	1.00%	2.25%
65	2.00%	3.00%
66	1.00%	1.75%
67	2.00%	2.00%
68	1.00%	1.50%
69	2.00%	-0.50%
70	1.00%	3.75%
71	2.00%	2.50%
72	1.00%	2.50%
73	2.75%	3.75%
74	1.00%	4.50%
75	2.00%	3.50%
76	4.00%	3.75%
77	3.75%	3.25%
78	3.00%	2.50%
79	4.50%	2.25%
80	7.00%	1.75%
81	12.00%	-0.50%
82	18.00%	2.00%
83	1.50%	2.00%
84	-4.00%	3.00%
85	-8.50%	3.00%
86	4.50%	4.00%
87	12.75%	-
88	-	-
89	-	-
90	-	-
91	-	-
Average	3.17%	2.54%



Sequence of returns matters greatly if there are withdrawals!



Managing sequence risk

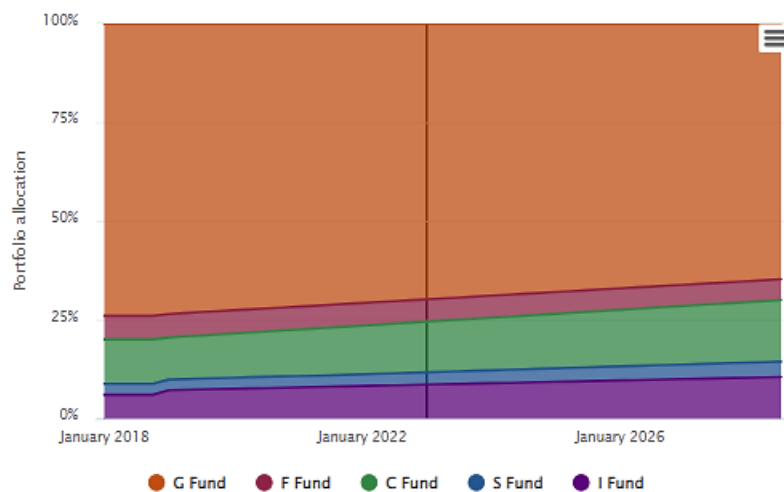
- **Spend conservatively**
 - Take distributions that are as small as you can afford for first few years* of your retirement
 - Might be painful and/or uncomfortable to live below the standard of living you desire
- **Flexing spending based on market returns**
 - Spend less when market returns are below a certain limit*
 - Easier said than done!
- **Reduce the volatility of your investment mix**
 - Use the power of diversification and market risk mitigation built into the TSP's Lifecycle funds, e.g., the Lifecycle Income Fund
 - Simple and automatic!

* You will have to guess – how many years, what rate of return?

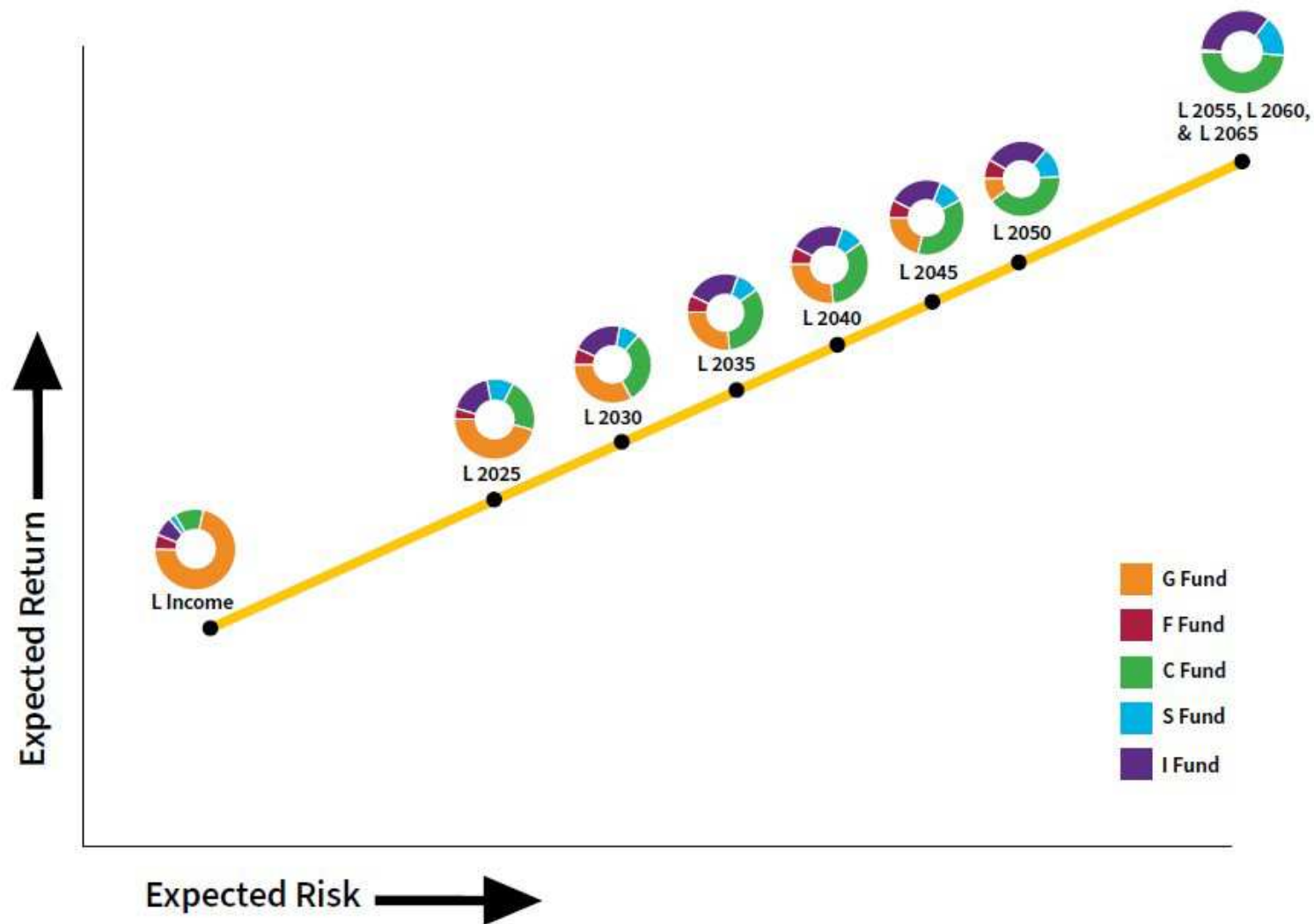
Lifecycle Income Fund

- Objective is to achieve a low level of growth with a high emphasis on preservation of assets
- The L Income Fund's asset allocation does not change quarterly
- It is rebalanced daily to maintain its target investment mix

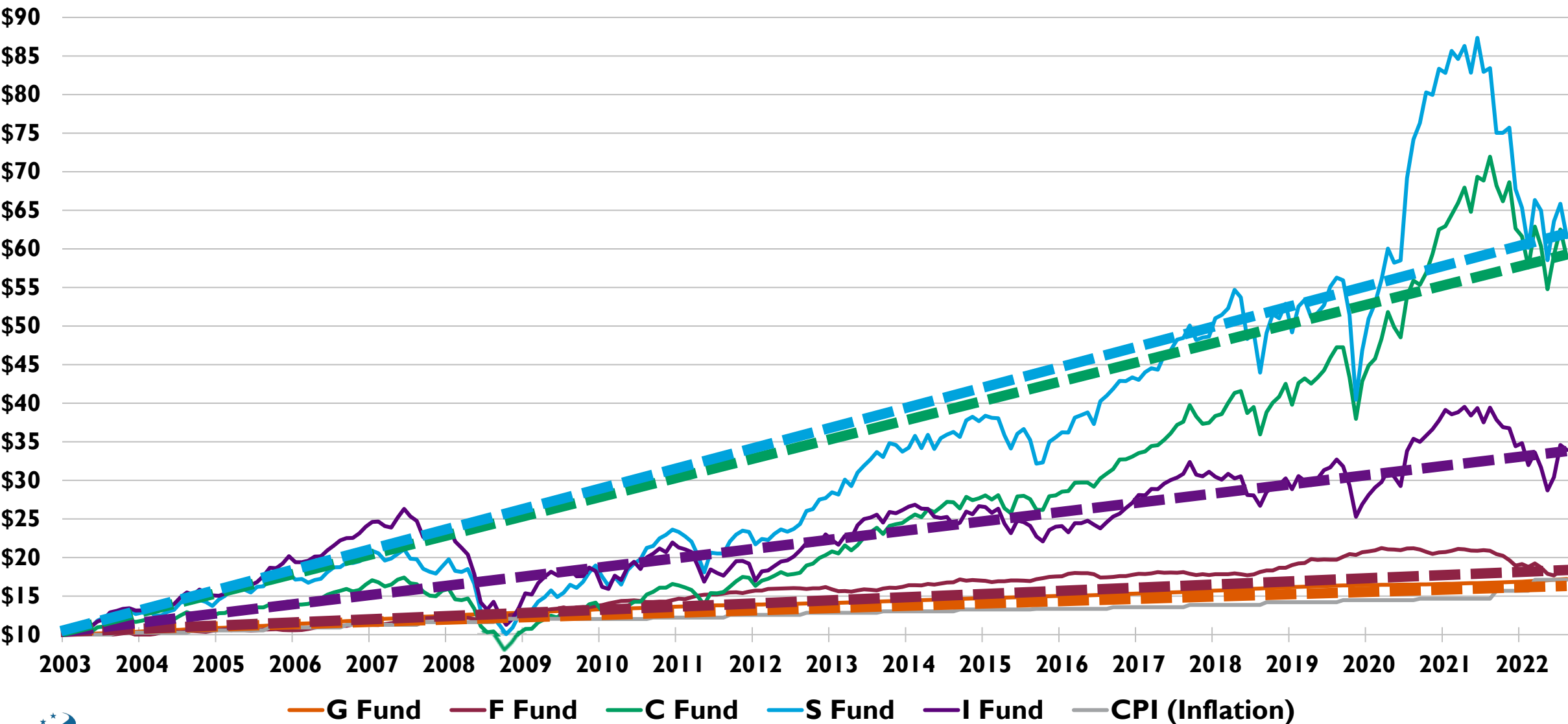
L Income Allocation



L Funds and the Efficient Frontier



Performance of the TSP Fund Share Prices



Spending shock risks

Inflation, Long-term care, Longevity related financial issues, Divorce, Death of a spouse, Changes to tax rules

Inflation – Impact on Cost of Living Allowances

FERS COLA

If inflation
increases by:

FERS COLA
increases by:

Up
to
2%

Same as
inflation

2%
to
3%

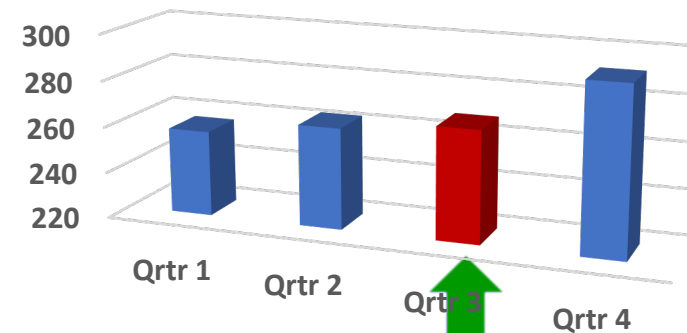
2%

Above
3%

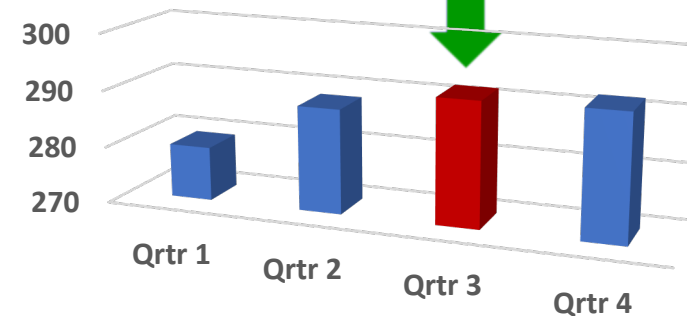
Inflation
minus
1%

Social Security COLA

2021 CPI-W



2022 CPI-W

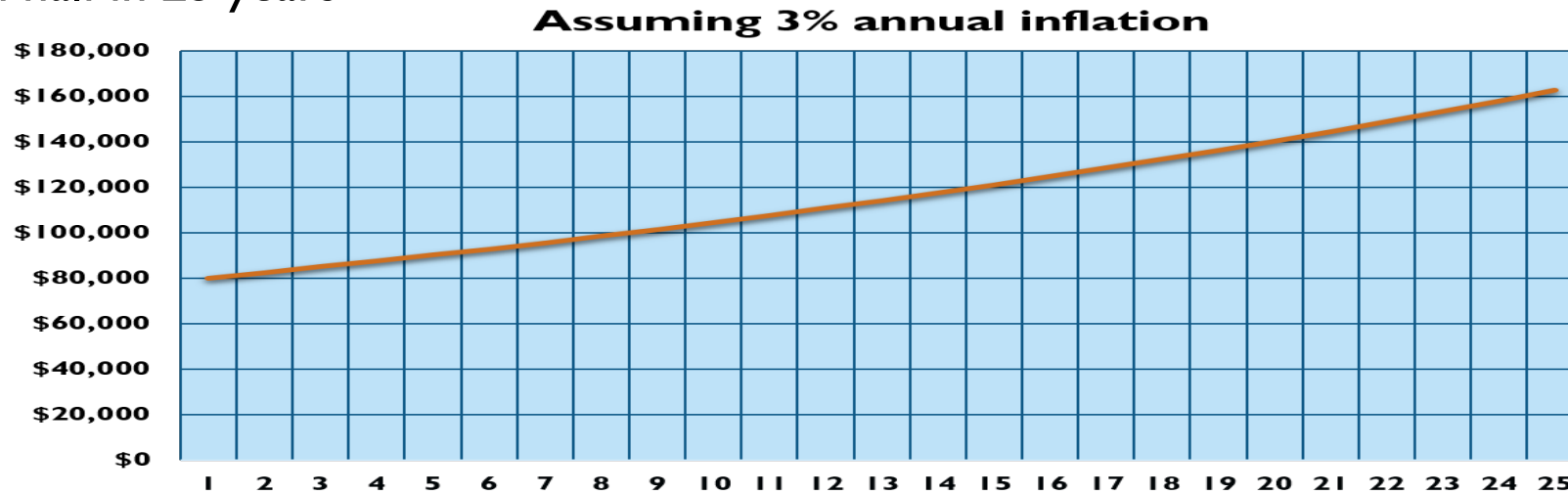


The average CPI-W for the third quarter of the previous year is compared to the average CPI-W for the third quarter of the current year. Whatever the percentage change is, Social Security benefits for the next calendar year will increase by the same amount.*

*Social Security Administration Publication No. 05-10526

Inflation – Impact on purchasing power

- Retirees face the risk that inflation will erode the purchasing power of their savings as they progress through retirement
- With 3 percent average annual; inflation, the purchasing power of a dollar will fall by more than half in 25 years



Managing inflation risk of a volatile portfolio

- Assume a particular inflation rate for entire retirement period and project spending increases accordingly, or
- Assume spending in today's dollars but project assets at a real rate of return that has inflation removed

However...

- Many retiree households' spending will not keep pace with inflation in as their consumption basket changes over time
- Many retirees may naturally consume less with age, which means their overall budget will not grow as quickly as the inflation rate

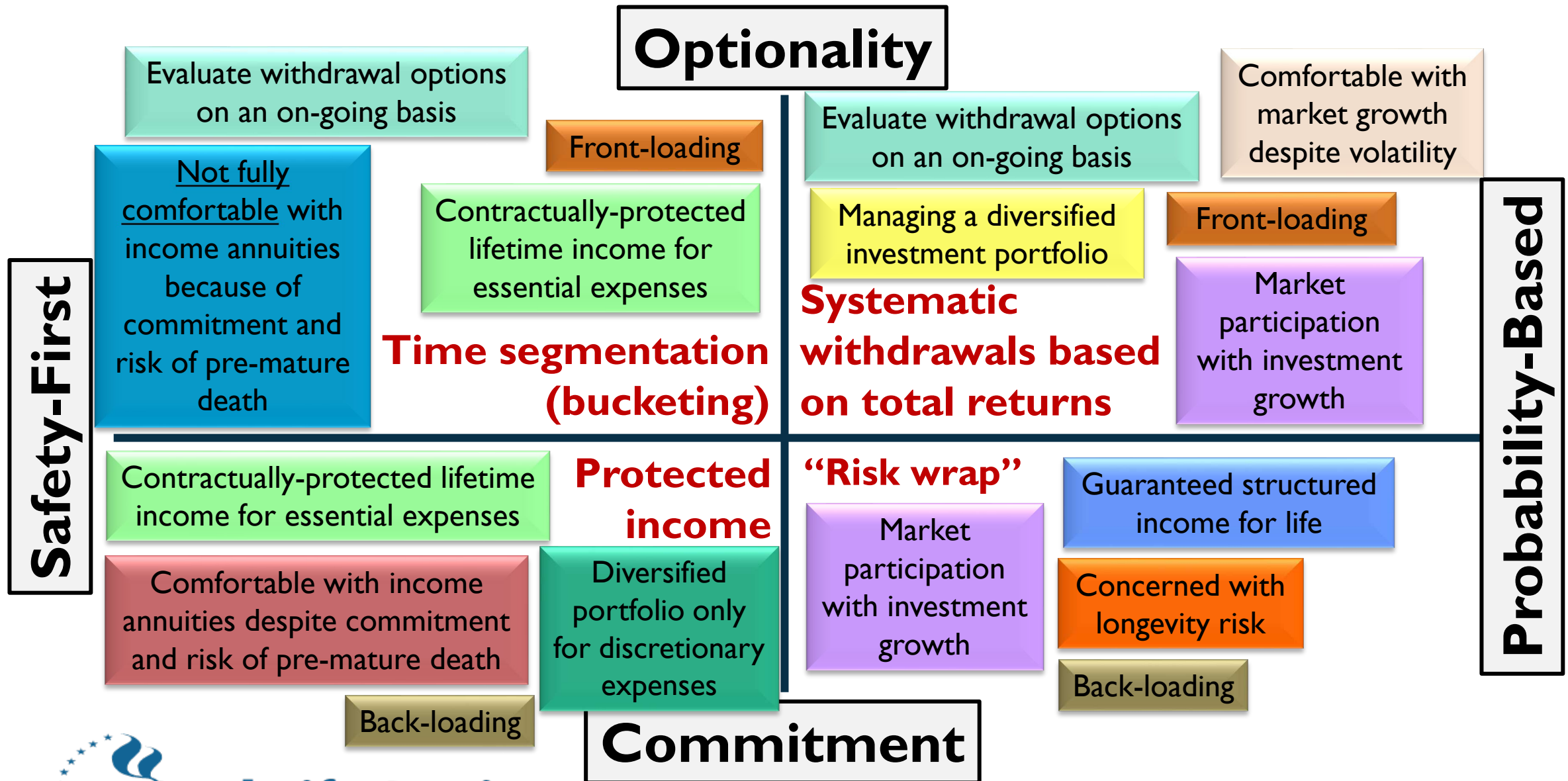
Retirement income drawdown strategies

Flooring, systematic, bucket

Retirement Income Strategies

- Focus of how to manage your TSP savings shifts from maximizing returns (accumulation) to provide income to meet spending needs and having a balance to draw from for the rest of your life (decumulation)
- There are many different “strategies” that span the spectrum of expected risk return as well as the logic (and motives) they’re based on
- Assessing what strategy or strategies may be optimal for you can be very difficult and confusing but it can be done if you:
 - Are willing to do the research with an agnostic approach
 - Have a clear understanding of your attitudes and preferences when it comes to managing financial risk in retirement

Retirement income preferences



Retirement Income Strategies

Systematic Strategy

Probability-based

Optionality

4% Rule

- Begin by withdrawing an amount equal to 4% of account balance over the course of the first year
- For each subsequent year, multiply the preceding year's dollar amount and add an inflation factor based on the previous year's inflation rate
- Don't adjust for market returns
- Inflation will determine how much money is withdrawn
- Market returns will determine how long the money lasts

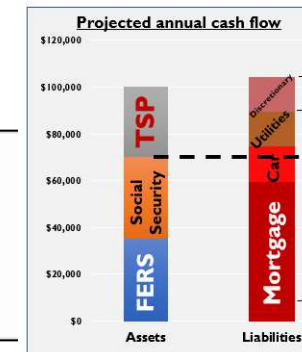
The math:

- Balance at retirement = **\$500,000**
- $\$500,000 \times 4\% = \$20,000$ (for first year)
- Monthly distributions = **\$1,667/month**
- **Second year:** Adjust for inflation (2.5%)
- $\$20,000 \times .025 = \500
- $\$20,000 + \$500 = \$20,500$
- Monthly distributions = **\$1,708/month**

Essential vs. Discretionary Strategy

Safety-First

Commitment



Discretionary expenses

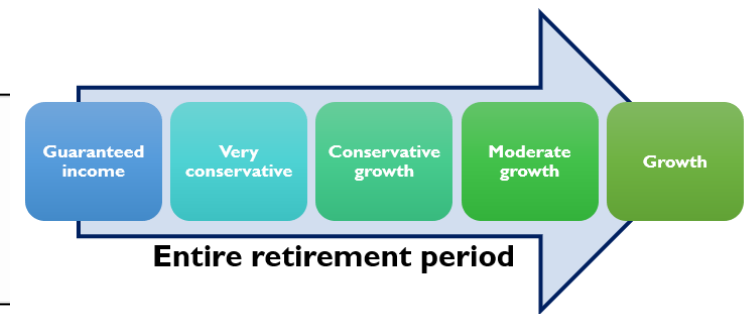
\$70,000 of fixed income and \$72,000 of essential expenses

Essential expenses

Time Segmentation Strategy

Safety-First

Optionality



Source: Pfau, Wade. 2017. How Much Can I Spend in Retirement: A Guide to Investment-Based Retirement Income Strategies.

Systematic Strategy

Example

4% Rule

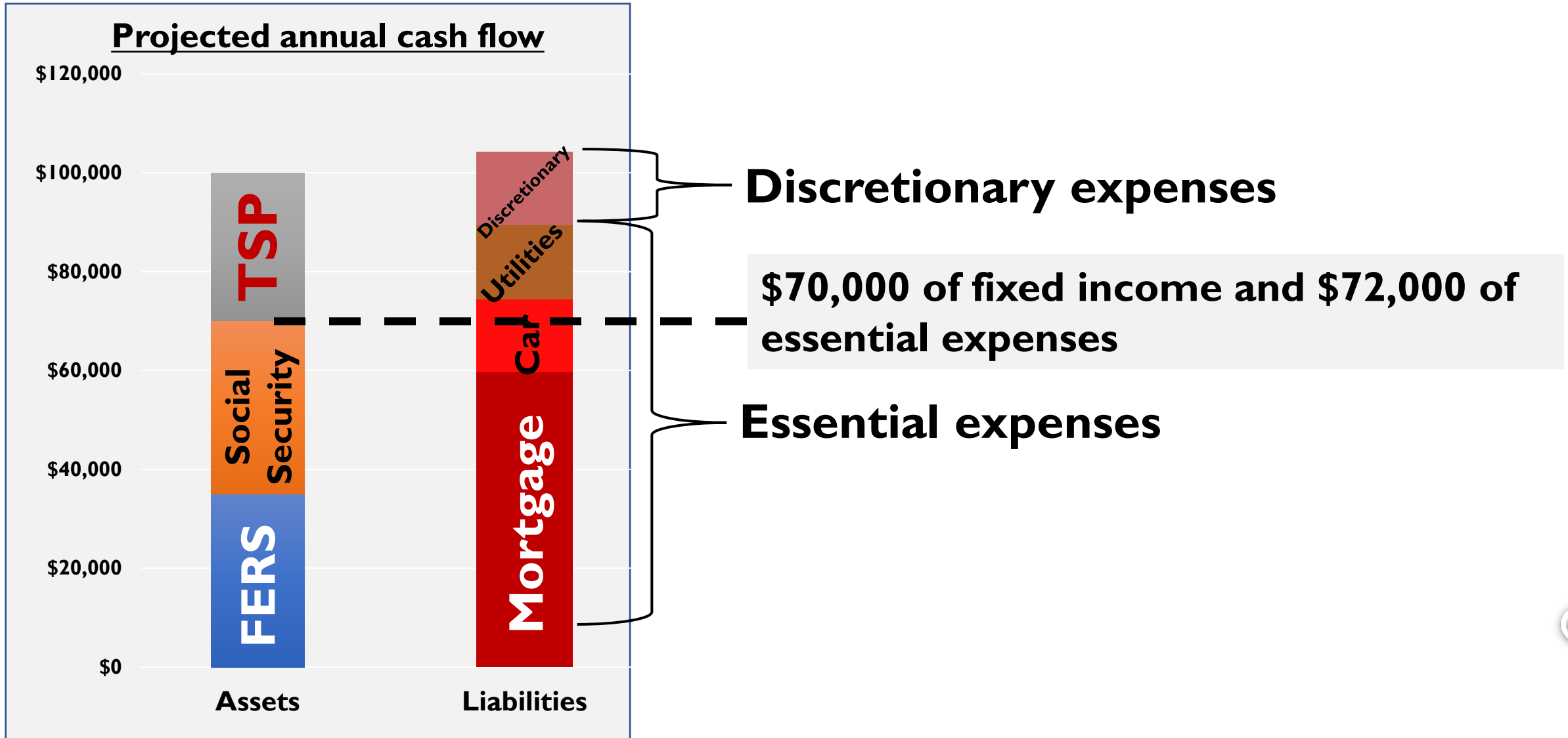
- Begin by withdrawing an amount equal to 4% of account balance over the course of the first year
- For each subsequent year, multiply the preceding year's dollar amount and add an inflation factor based on the previous year's inflation rate
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- Inflation will determine how much money is withdrawn
- Market returns will determine how long the money lasts

The math:

- Balance at retirement = **\$500,000**
- $\$500,000 \times 4\% = \textbf{\$20,000}$ (for first year)
- Monthly distributions = **\$1,667/month**
- **Second year:** Adjust for inflation (2.5%)
- $\$20,000 \times .025 = \500
- $\$20,000 + \$500 = \textbf{\$20,500}$
- Monthly distributions = **\$1,708/month**

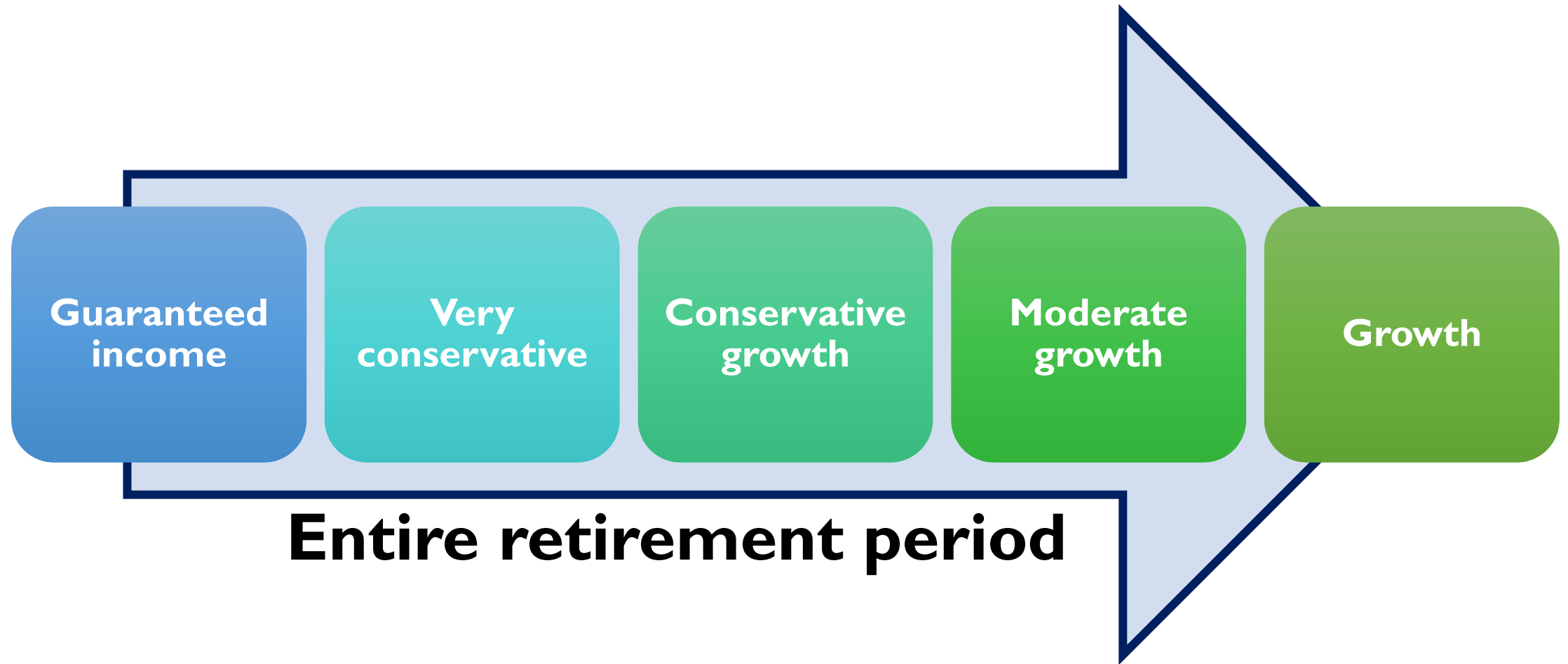
Essential vs. Discretionary Strategy

Example



Time Segmentation Strategy

Example



Fund Reallocation

Before
\$100,000

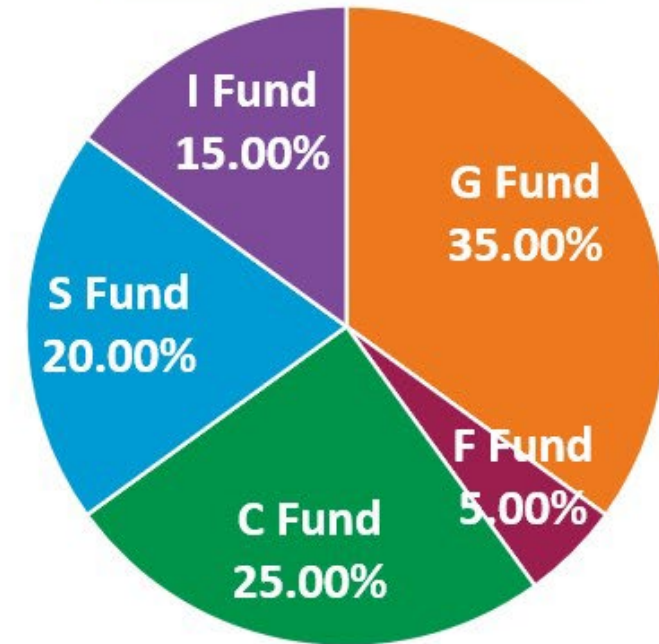
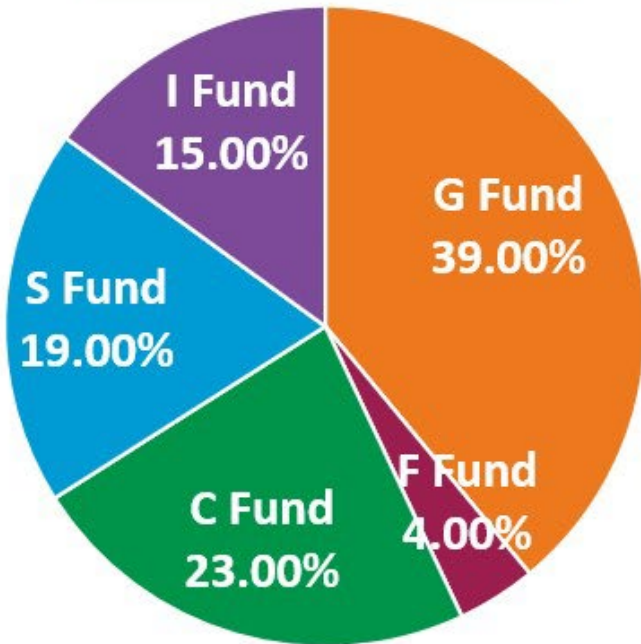
G Fund	39%	\$39,000
F Fund	4%	\$4,000
C Fund	23%	\$23,000
S Fund	19%	\$19,000
I Fund	15%	\$15,000

Change allocation to:

G 35%
F 5%
C 25%
S 20%
I 15%

After
\$100,000

G Fund	35%	\$35,000
F Fund	5%	\$5,000
C Fund	25%	\$25,000
S Fund	20%	\$20,000
I Fund	15%	\$15,000



Fund Transfer (\$ basis) - example I

Before
\$100,000

G Fund	39%	\$39,000
F Fund	4%	\$4,000
C Fund	23%	\$23,000
S Fund	19%	\$19,000
I Fund	15%	\$15,000

Transfer \$2,000 out of G

34% goes to C

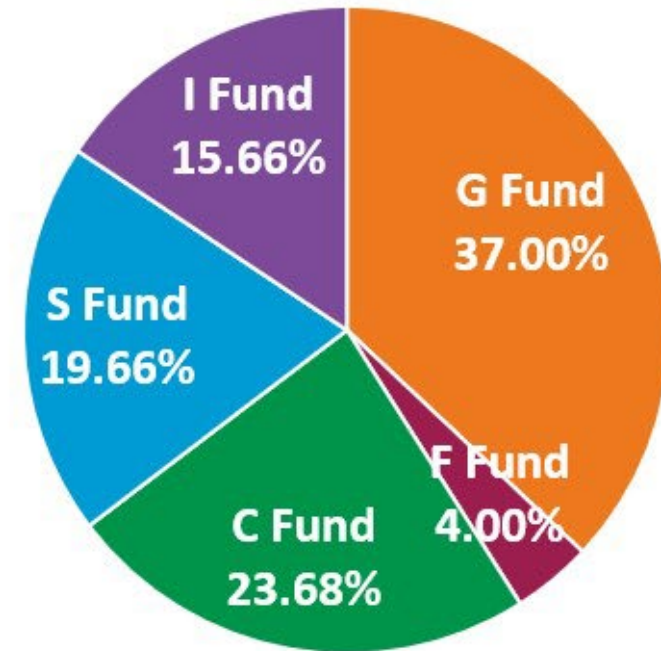
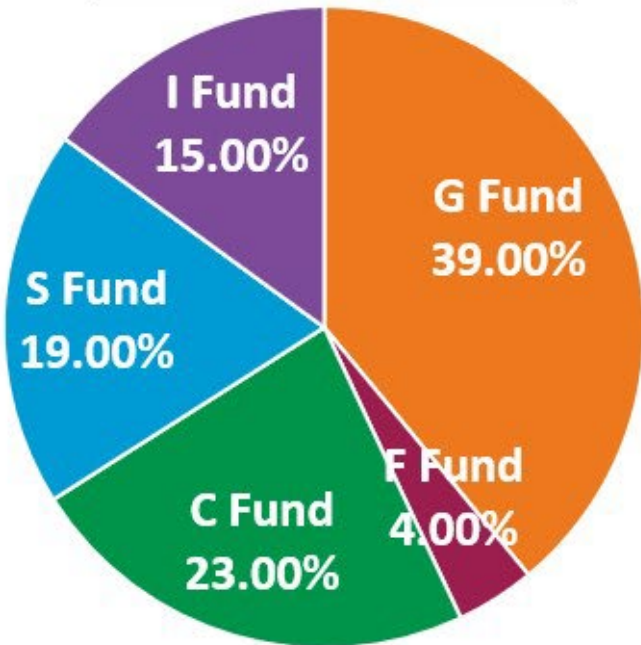
33% goes to S

33% goes to I

After

\$100,000

G Fund	37%	\$37,000
F Fund	4%	\$4,000
C Fund	23.68%	\$23,680
S Fund	19.67%	\$19,660
I Fund	15.66%	\$15,660



Example of using a Funds Transfer to replicate taking withdrawal from only the G Fund

Retiree receives installment payment from their TSP account – the payment comes out “pro-rata”

Fund	Percent of account	Pro-rata withdrawal
G Fund	50.00%	\$1,500.00
F Fund	10.00%	\$300.00
C Fund	15.00%	\$450.00
S Fund	15.00%	\$450.00
I Fund	10.00%	\$300.00
	<u>100.00%</u>	<u>\$3,000.00</u>

Example of using a Funds Transfer to replicate taking withdrawal from only the G Fund

Retiree receives installment payment from their TSP account – the payment comes out “pro-rata”

After retiree receives distribution, they do a funds transfer in their account

Fund	Percent of account	Pro-rata withdrawal	Fund Transfer	Transfer out	Transfer in
G Fund	50.00%	\$1,500.00	G Fund	\$1,500.00	
F Fund	10.00%	\$300.00	F Fund		\$300.00
C Fund	15.00%	\$450.00	C Fund		\$450.00
S Fund	15.00%	\$450.00	S Fund		\$450.00
I Fund	10.00%	\$300.00	I Fund		\$300.00
	<u>100.00%</u>	<u>\$3,000.00</u>		<u>\$1,500.00</u>	<u>\$1,500.00</u>

Example of using a Funds Transfer to replicate taking withdrawal from only the G Fund

Retiree receives installment payment from their TSP account – the payment comes out “pro-rata”

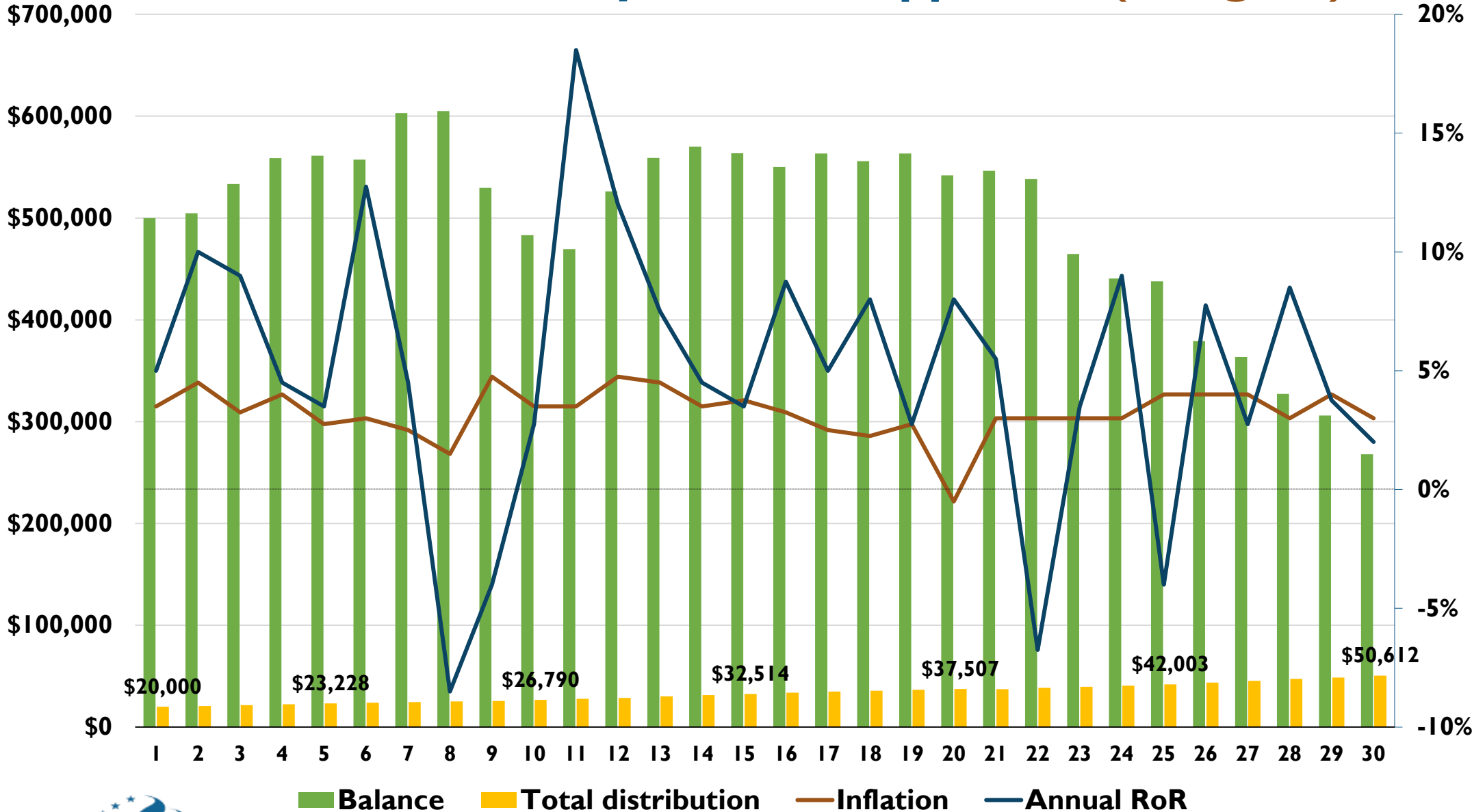
After retiree receives distribution, they do a funds transfer in their account

Impact of making the funds transfer is the equivalent of having taken a distribution from only the G Fund

Fund	Percent of account	Pro-rata withdrawal	Fund Transfer	Transfer out	Transfer in	Change to balance
G Fund	50.00%	\$1,500.00	G Fund	\$1,500.00		-\$3,000.00
F Fund	10.00%	\$300.00	F Fund		\$300.00	\$0.00
C Fund	15.00%	\$450.00	C Fund		\$450.00	\$0.00
S Fund	15.00%	\$450.00	S Fund		\$450.00	\$0.00
I Fund	10.00%	\$300.00	I Fund		\$300.00	\$0.00
	<u>100.00%</u>	<u>\$3,000.00</u>		<u>\$1,500.00</u>	<u>\$1,500.00</u>	<u>-\$3,000.00</u>

Drawdown and balance sustainability scenarios

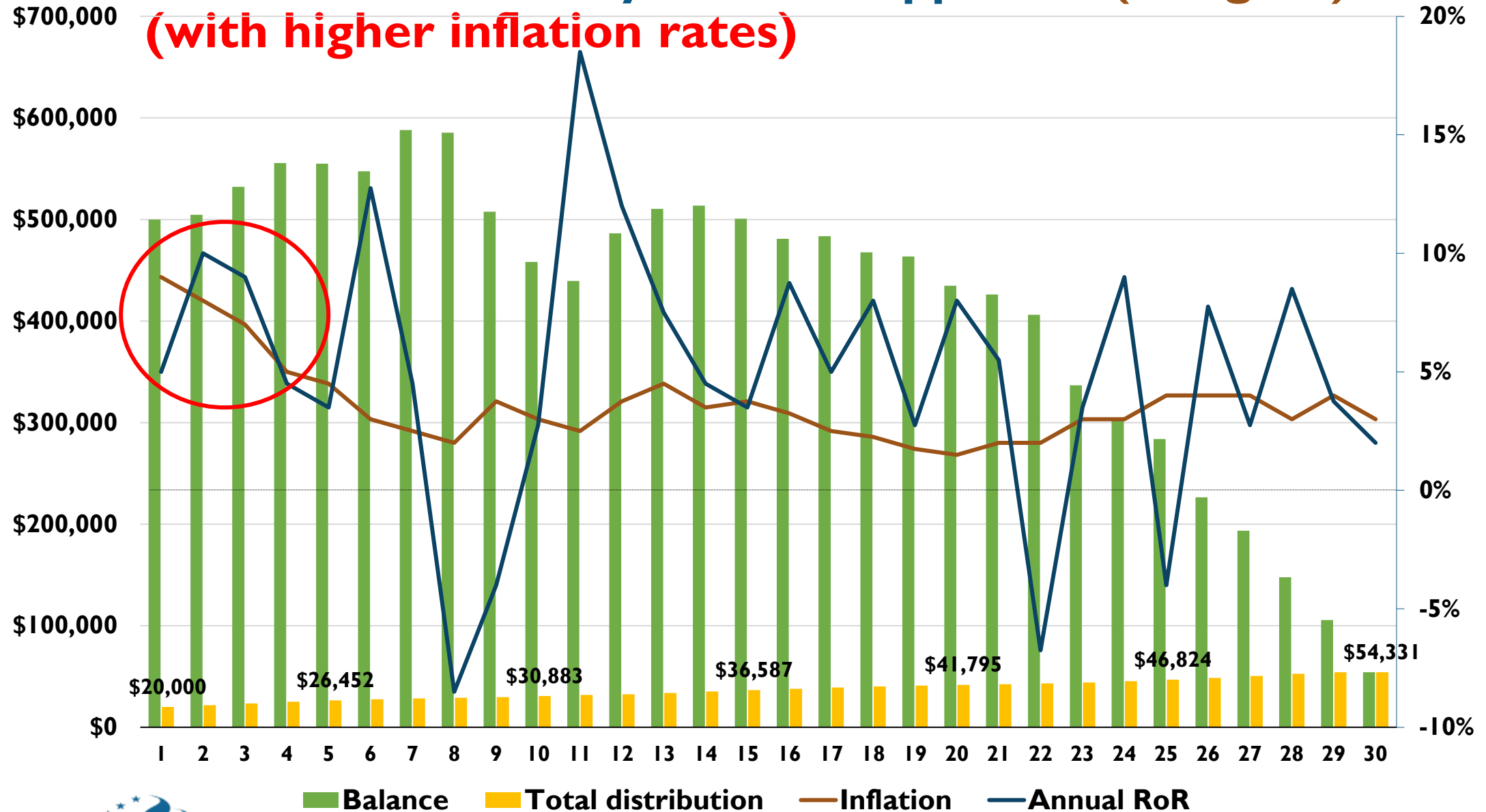
RoR scenario #1 of Systematic Approach (using 4%)



Thrift Savings Plan

Average	RoR	Inflation
CAGR = 4.78%	5.00%	3.25%

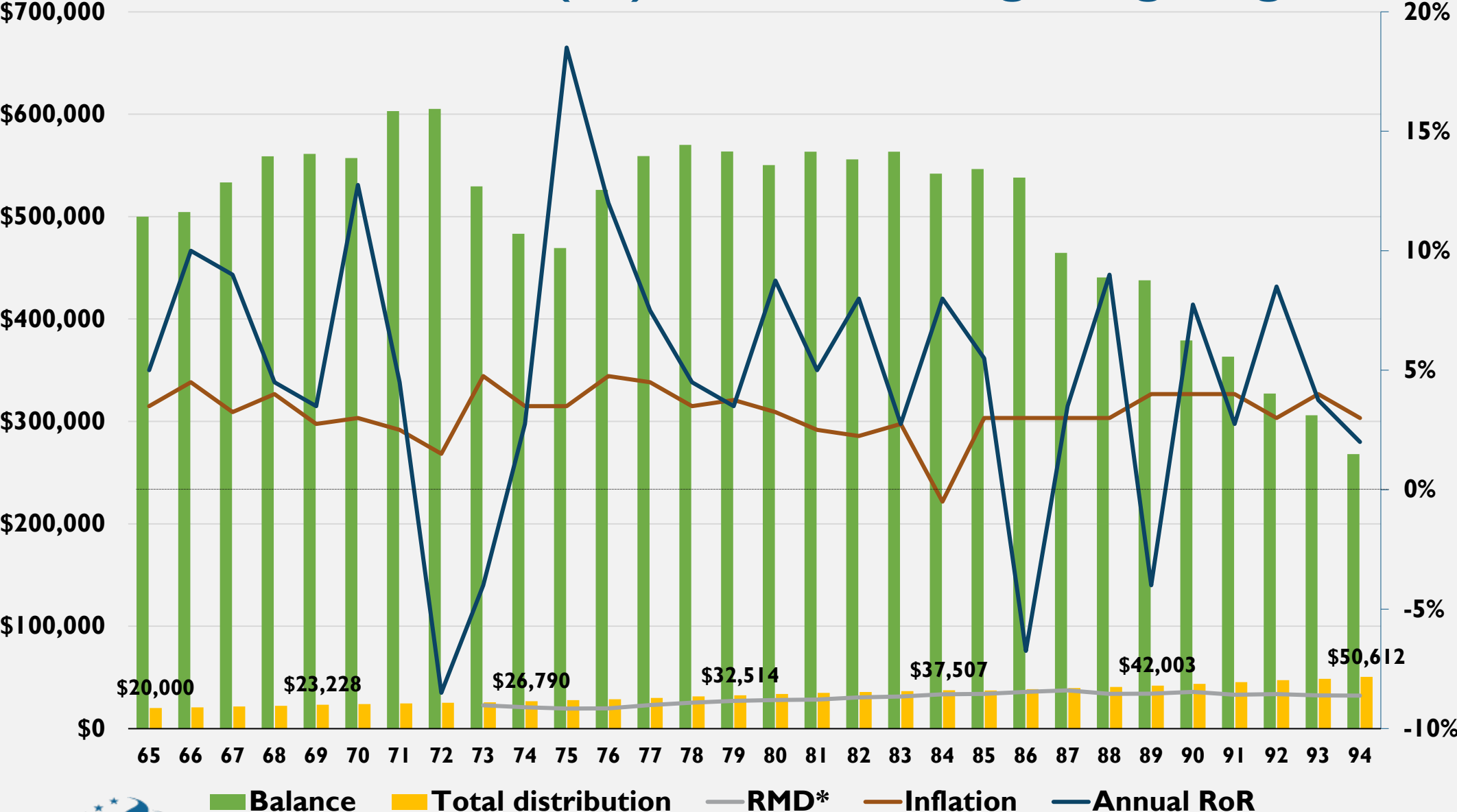
RoR scenario #1 of Systematic Approach (using 4%) (with higher inflation rates)



	RoR	Inflation
1	5.00%	9.00%
2	10.00%	8.00%
3	9.00%	7.00%
4	4.50%	5.00%
5	3.50%	4.50%
6	12.75%	3.00%
7	4.50%	2.50%
8	-8.50%	2.00%
9	-4.00%	3.75%
10	2.75%	3.00%
11	18.50%	2.50%
12	12.00%	3.75%
13	7.50%	4.50%
14	4.50%	3.50%
15	3.50%	3.75%
16	8.75%	3.25%
17	5.00%	2.50%
18	8.00%	2.25%
19	2.75%	1.75%
20	8.00%	1.50%
21	5.50%	2.00%
22	-6.75%	2.00%
23	3.50%	3.00%
24	9.00%	3.00%
25	-4.00%	4.00%
26	7.75%	4.00%
27	2.75%	4.00%
28	8.50%	3.00%
29	3.75%	4.00%
30	2.00%	3.00%

Average RoR: 5.00%
CAGR = 4.78%
Average Inflation: 3.63%

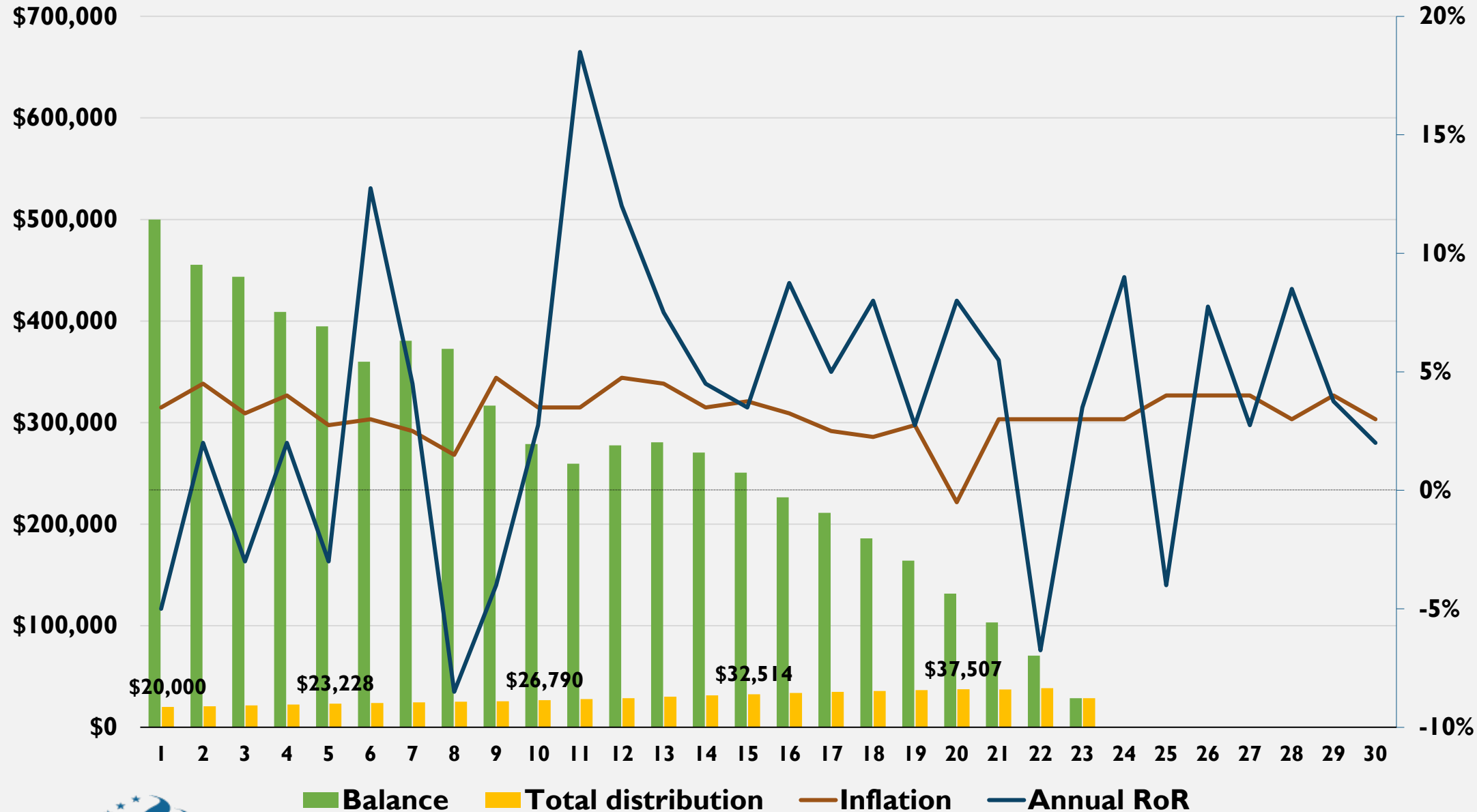
RoR Scenario #1 (4%) with RMDs* beginning at age 73



	RoR	Inflation
65	5.00%	3.50%
66	10.00%	4.50%
67	9.00%	3.25%
68	4.50%	4.00%
69	3.50%	2.75%
70	12.75%	3.00%
71	4.50%	1.50%
72	-8.50%	1.50%
73	-4.00%	4.75%
74	2.75%	3.50%
75	18.50%	3.50%
76	12.00%	4.75%
77	7.50%	4.50%
78	4.50%	3.50%
79	3.50%	3.75%
80	8.75%	3.25%
81	5.00%	2.50%
82	8.00%	2.25%
83	2.75%	2.75%
84	8.00%	-0.50%
85	5.50%	3.00%
86	-6.75%	3.00%
87	3.50%	3.00%
88	9.00%	3.00%
89	-4.00%	4.00%
90	7.75%	4.00%
91	2.75%	4.00%
92	8.50%	3.00%
93	3.75%	4.00%
94	2.00%	3.00%

Average 5.00% 3.25%
CAGR = 4.78% 82

RoR scenario #1 (using 4%) with poor returns first five years

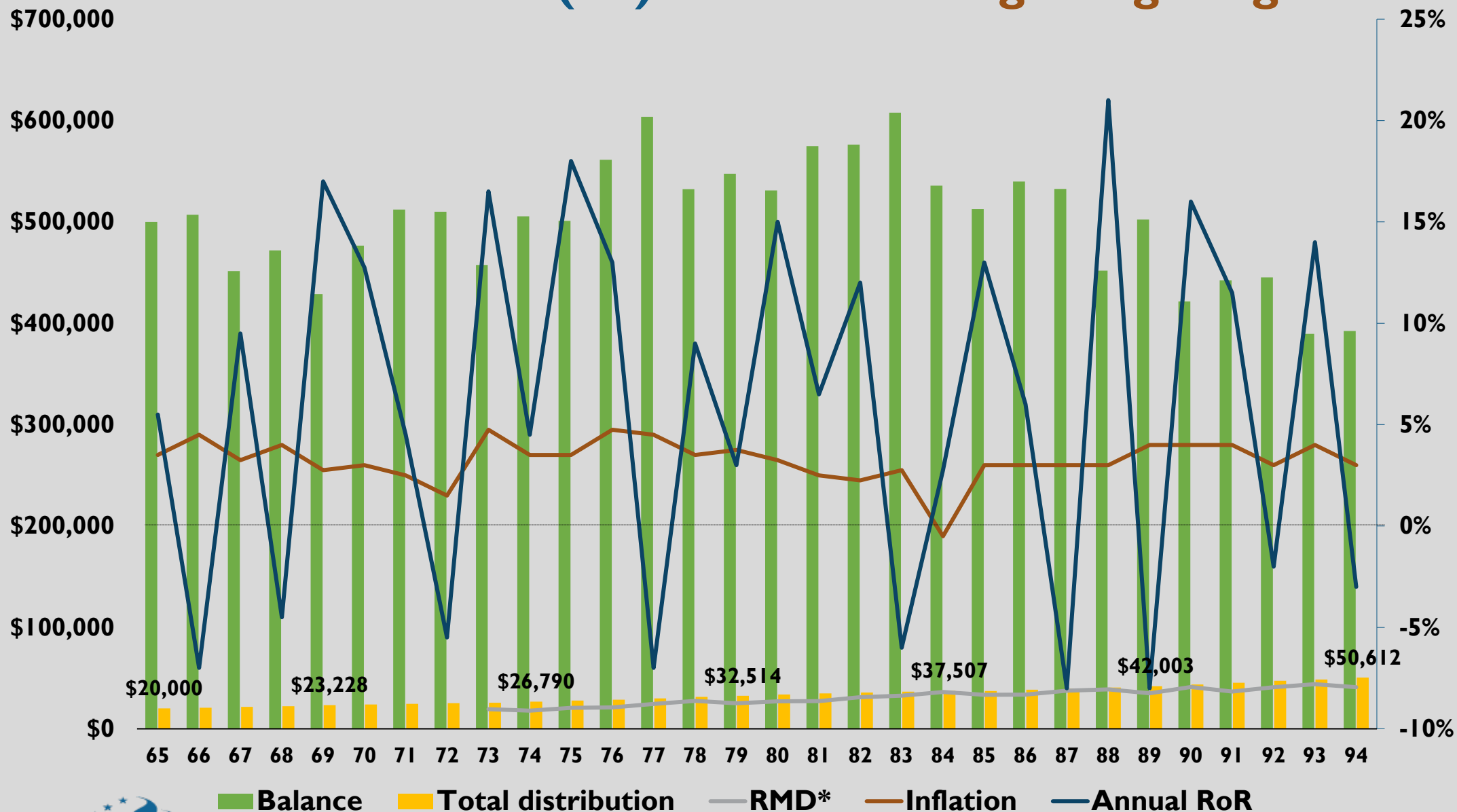


	RoR	Inflation
1	-5.00%	3.50%
2	2.00%	4.50%
3	-3.00%	3.25%
4	2.00%	4.00%
5	-3.00%	2.75%
6	12.75%	3.00%
7	4.50%	1.50%
8	-8.50%	1.50%
9	-4.00%	4.75%
10	2.75%	3.50%
11	18.50%	3.50%
12	12.00%	4.75%
13	7.50%	4.50%
14	4.50%	3.50%
15	3.50%	3.75%
16	8.75%	3.25%
17	5.00%	2.50%
18	8.00%	2.25%
19	2.75%	2.75%
20	8.00%	-0.50%
21	5.50%	3.00%
22	-6.75%	3.00%
23	3.50%	3.00%
24	9.00%	3.00%
25	-4.00%	4.00%
26	7.75%	4.00%
27	2.75%	4.00%
28	8.50%	3.00%
29	3.75%	4.00%
30	2.00%	3.00%

Average **3.70%** **3.25%**

CAGR = 3.46% 83

RoR Scenario #2 (4%) with RMDs* beginning at age 73



	RoR	Inflation
65	5.50%	3.50%
66	-7.0%	4.50%
67	9.50%	3.25%
68	-4.50%	4.00%
69	17.0%	2.75%
70	12.75%	3.00%
71	4.50%	1.50%
72	-5.50%	1.50%
73	16.5%	4.75%
74	4.50%	3.50%
75	18.0%	3.50%
76	13.0%	4.75%
77	-7.0%	4.50%
78	9.00%	3.50%
79	3.00%	3.75%
80	15.0%	3.25%
81	6.50%	2.50%
82	12.0%	2.25%
83	-6.00%	2.75%
84	2.75%	-0.50%
85	13.0%	3.00%
86	6.00%	3.00%
87	-8.00%	3.00%
88	21.00%	3.00%
89	-8.00%	4.00%
90	2.00%	4.00%
91	11.50%	4.00%
92	-2.00%	3.00%
93	14.00%	4.00%
94	-3.00%	3.00%

Average **6.00%** **3.25%**

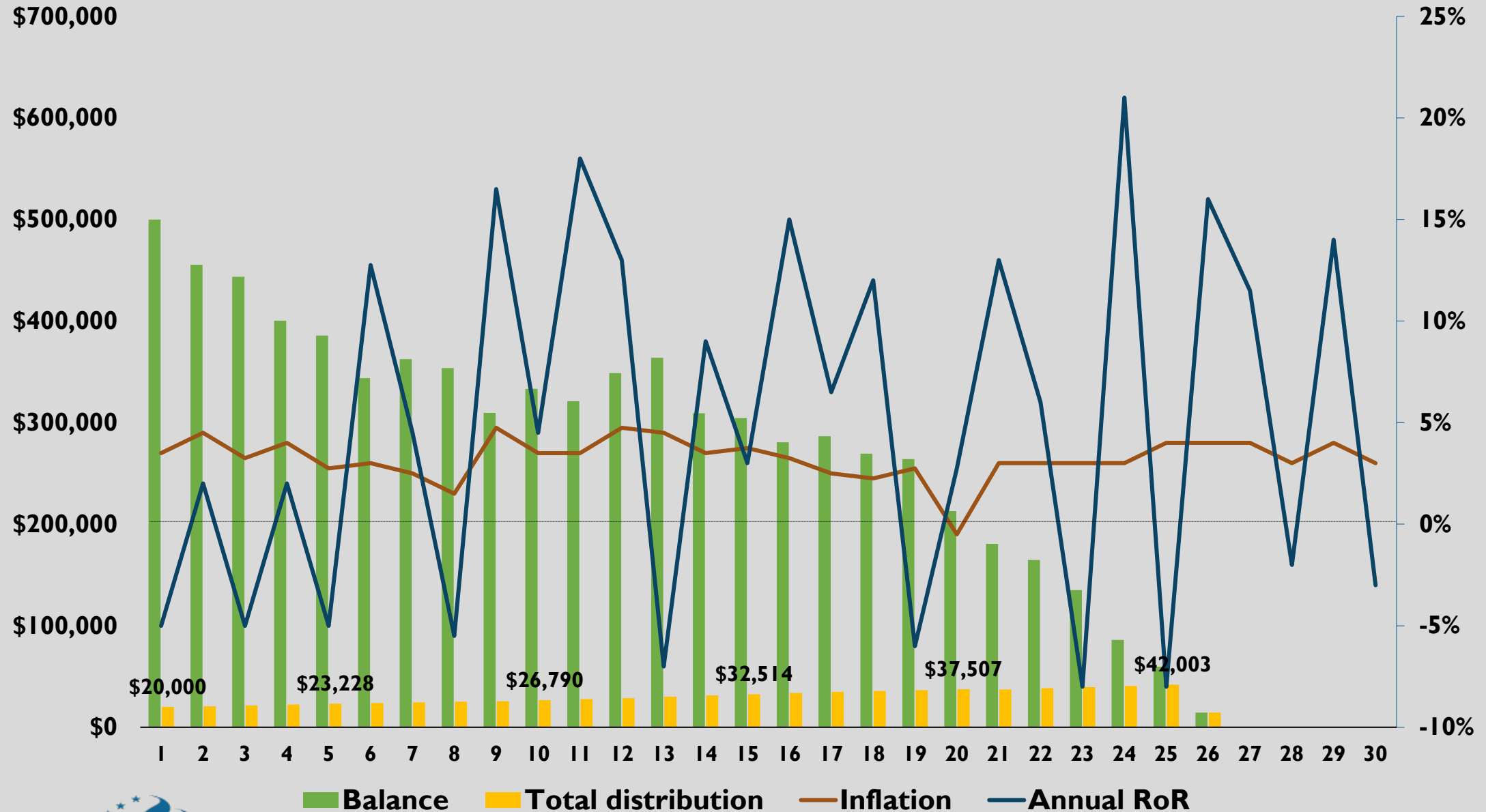
CAGR = 5.73%

84



Thrift Savings Plan

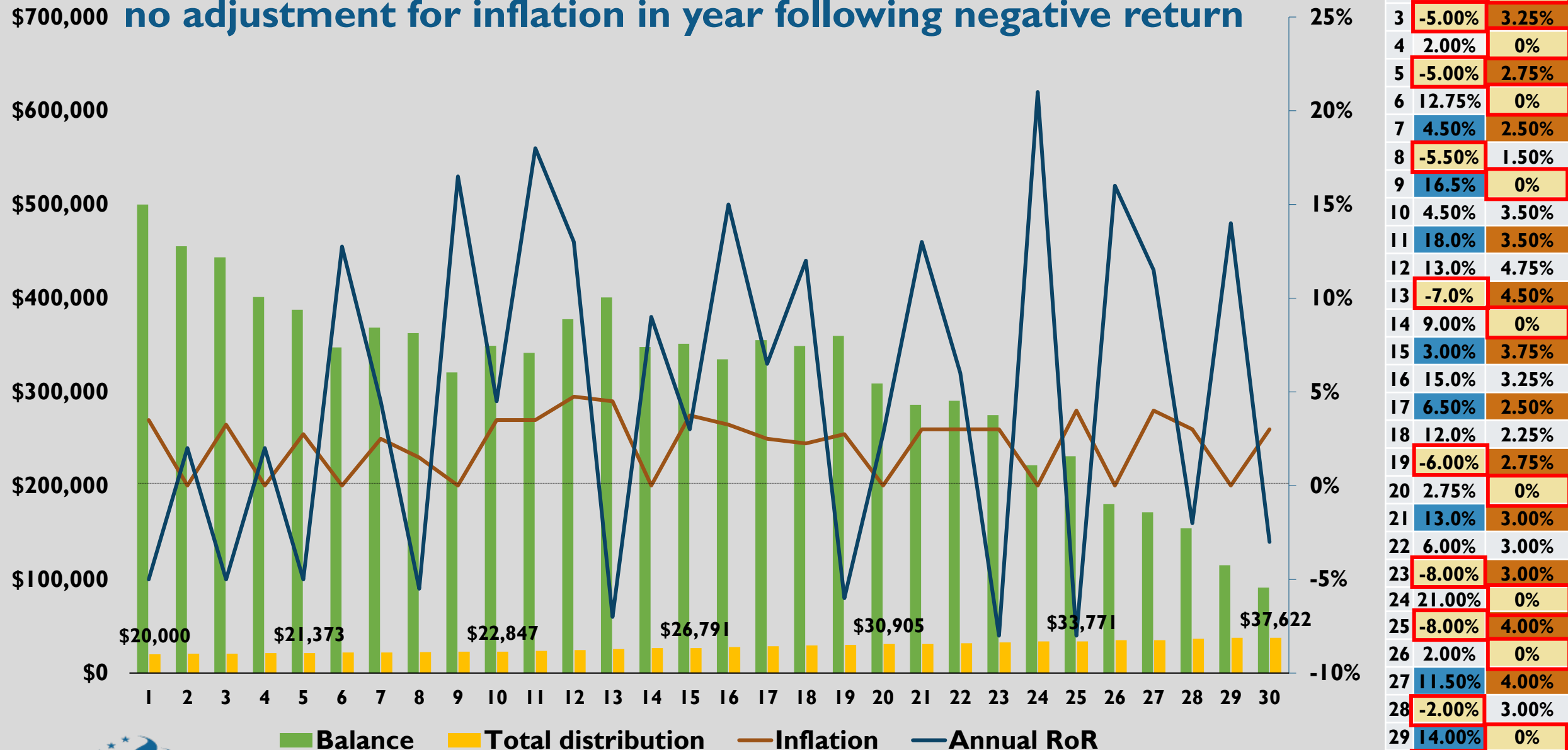
RoR scenario #2 (using 4%) with poor returns first five years



	RoR	Inflation
1	-5.00%	3.50%
2	2.00%	4.50%
3	-5.00%	3.25%
4	2.00%	4.00%
5	-5.00%	2.75%
6	12.75%	3.00%
7	4.50%	1.50%
8	-5.50%	1.50%
9	16.5%	4.75%
10	4.50%	3.50%
11	18.0%	3.50%
12	13.0%	4.75%
13	-7.0%	4.50%
14	9.00%	3.50%
15	3.00%	3.75%
16	15.0%	3.25%
17	6.50%	2.50%
18	12.0%	2.25%
19	-6.00%	2.75%
20	2.75%	-0.50%
21	13.0%	3.00%
22	6.00%	3.00%
23	-8.00%	3.00%
24	21.00%	3.00%
25	-8.00%	4.00%
26	2.00%	4.00%
27	11.50%	4.00%
28	-2.00%	3.00%
29	14.00%	4.00%
30	-3.00%	3.00%
Average	4.95%	3.25%

CAGR = 4.69%

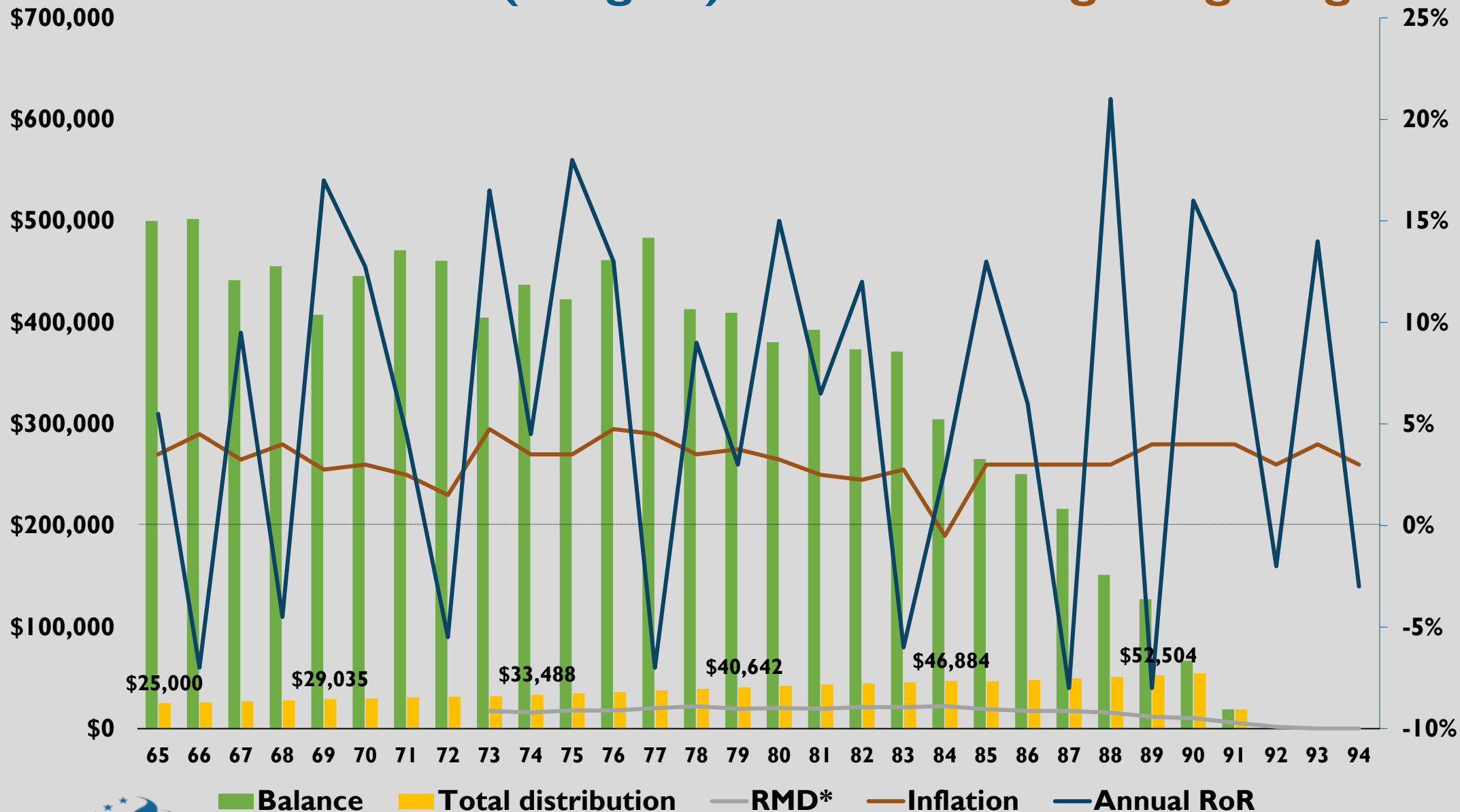
RoR scenario #2 (using 4%) with poor returns first five years – no adjustment for inflation in year following negative return



Thrift Savings Plan

CAGR = 4.69%

RoR Scenario #2 (using 5%) with RMDs* beginning at age 73



	RoR	Inflation
65	5.50%	3.50%
66	-7.0%	4.50%
67	9.50%	3.25%
68	-4.50%	4.00%
69	17.0%	2.75%
70	12.75%	3.00%
71	4.50%	1.50%
72	-5.50%	1.50%
73	16.5%	4.75%
74	4.50%	3.50%
75	18.0%	3.50%
76	13.0%	4.75%
77	-7.0%	4.50%
78	9.00%	3.50%
79	3.00%	3.75%
80	15.0%	3.25%
81	6.50%	2.50%
82	12.0%	2.25%
83	-6.00%	2.75%
84	2.75%	-0.50%
85	13.0%	3.00%
86	6.00%	3.00%
87	-8.00%	3.00%
88	21.00%	3.00%
89	-8.00%	4.00%
90	2.00%	4.00%
91	11.50%	4.00%
92	-2.00%	3.00%
93	14.00%	4.00%
94	-3.00%	3.00%

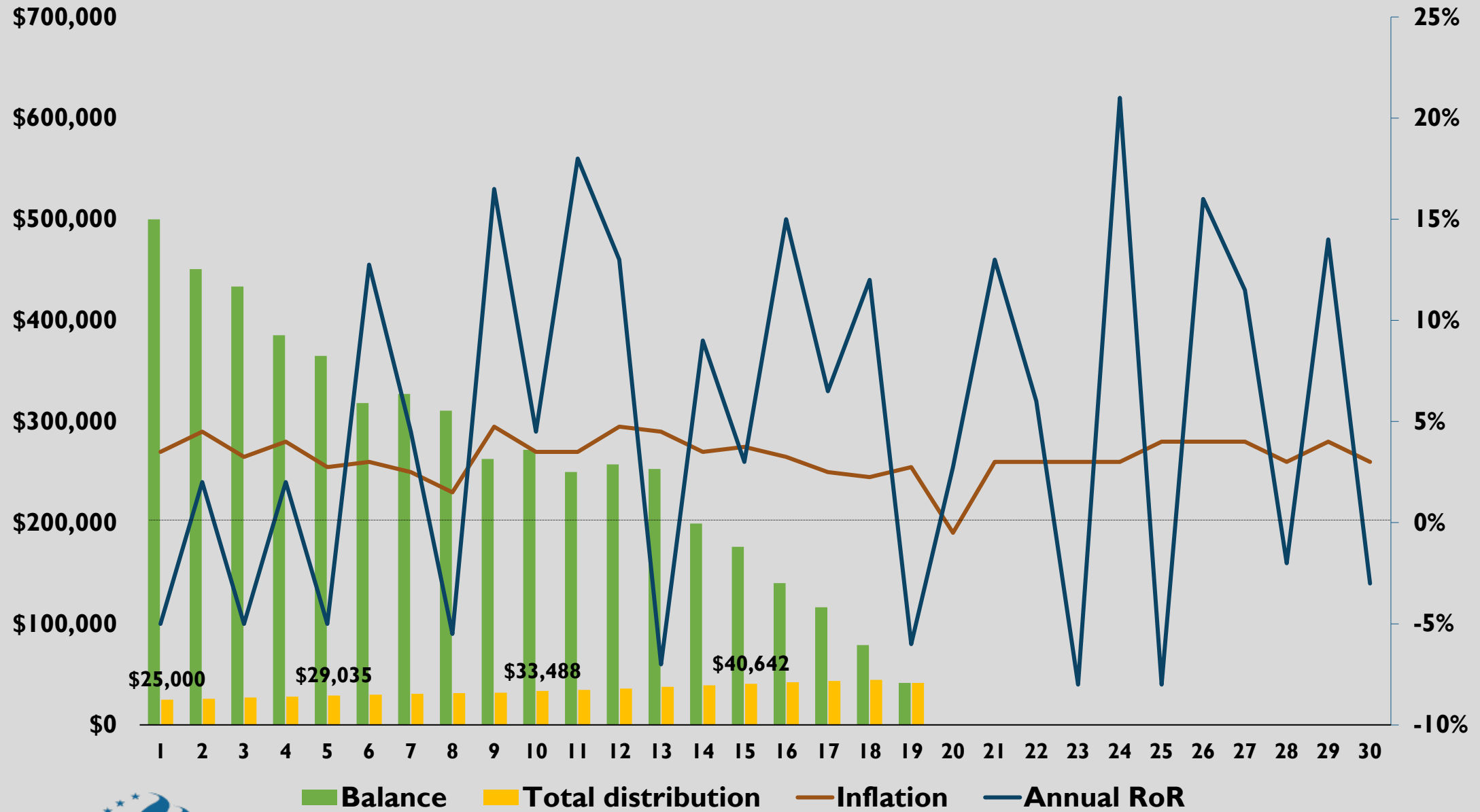
Average **6.00%** **3.25%**

CAGR = 5.73% **87**



Thrift Savings Plan

RoR scenario #2 (using 5%) with poor returns first five years

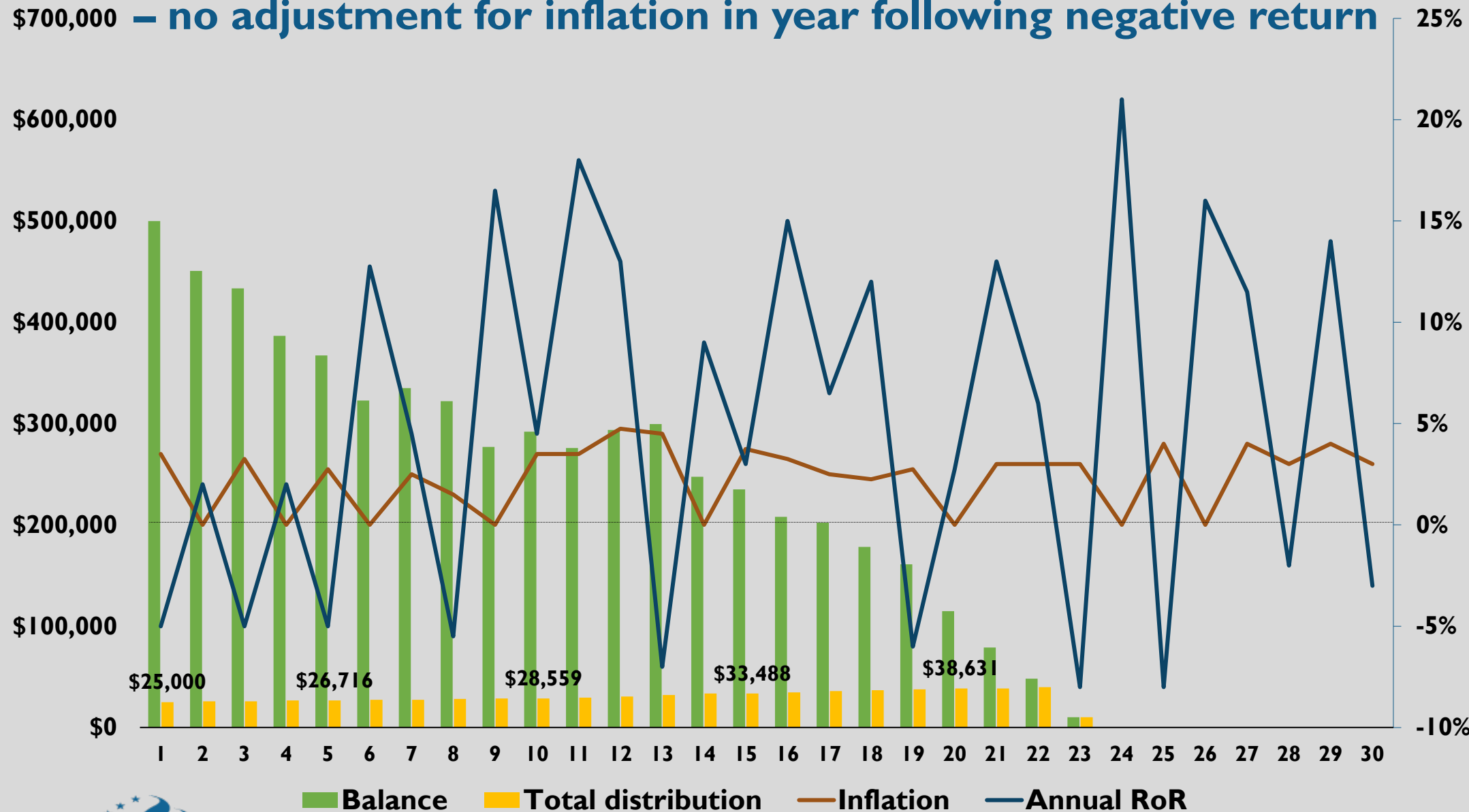


	RoR	Inflation
1	-5.00%	3.50%
2	2.00%	4.50%
3	-5.00%	3.25%
4	2.00%	4.00%
5	-5.00%	2.75%
6	12.75%	3.00%
7	4.50%	1.50%
8	-5.50%	1.50%
9	16.5%	4.75%
10	4.50%	3.50%
11	18.0%	3.50%
12	13.0%	4.75%
13	-7.0%	4.50%
14	9.00%	3.50%
15	3.00%	3.75%
16	15.0%	3.25%
17	6.50%	2.50%
18	12.0%	2.25%
19	-6.00%	2.75%
20	2.75%	-0.50%
21	13.0%	3.00%
22	6.00%	3.00%
23	-8.00%	3.00%
24	21.00%	3.00%
25	-8.00%	4.00%
26	2.00%	4.00%
27	11.50%	4.00%
28	-2.00%	3.00%
29	14.00%	4.00%
30	-3.00%	3.00%

Average **4.95%** **3.25%**

CAGR = 4.69%

RoR scenario #2 of (using 5%) with poor returns first five years – no adjustment for inflation in year following negative return



	RoR	Inflation
1	-5.00%	3.50%
2	2.00%	0%
3	-5.00%	3.25%
4	2.00%	0%
5	-5.00%	2.75%
6	12.75%	0%
7	4.50%	2.50%
8	-5.50%	1.50%
9	16.5%	0%
10	4.50%	3.50%
11	18.0%	3.50%
12	13.0%	4.75%
13	-7.0%	4.50%
14	9.00%	0%
15	3.00%	3.75%
16	15.0%	3.25%
17	6.50%	2.50%
18	12.0%	2.25%
19	-6.00%	2.75%
20	2.75%	0%
21	13.0%	3.00%
22	6.00%	3.00%
23	-8.00%	3.00%
24	21.00%	0%
25	-8.00%	4.00%
26	2.00%	0%
27	11.50%	4.00%
28	-2.00%	3.00%
29	14.00%	0%
30	-3.00%	3.00%
Average	4.95%	2.38%

CAGR = 4.69%

Case Study: Mike

Mike, age 56 is currently earning approximately \$96,000/yr. He wants to retire on ~80% of his income at age 65



He currently has \$250,000 in his TSP and is contributing at the rate of 5%.
If he continues to work until age 65 contributing at the same rate and his salary increases at ~3%/yr., and doesn't take out any loans or withdrawals, what would his balance be at age 65?

- At 5% Rate of Return (RoR)/yr ~ \$509,000
- At 7% RoR/yr ~ \$592,000



- If his salary increases at ~3%/yr., it will be about \$125,260 at 65
- 80% of his last year's salary would be about \$100,200
- His monthly **"Expected Need"** would be \$100,200 divided by 12:



\$8,350/month



Case Study: Mike

If Mike begins receiving Social Security retirement income at the beginning of his retirement (age 65), we can estimate his monthly benefit at **\$2,232**



Mike's FERS annuity at age 65 using FERS formula at OPM.gov:
 $\$124,000 \times 30 \text{ years} \times 1.1\% = \$40,920$; subtract 10% for Survivor Annuity ($\$36,828$)
 $\$36,828 / 12 = \mathbf{\$3,070}$



\$3,050

This is the amount he'll have to take monthly from his retirement savings (TSP)

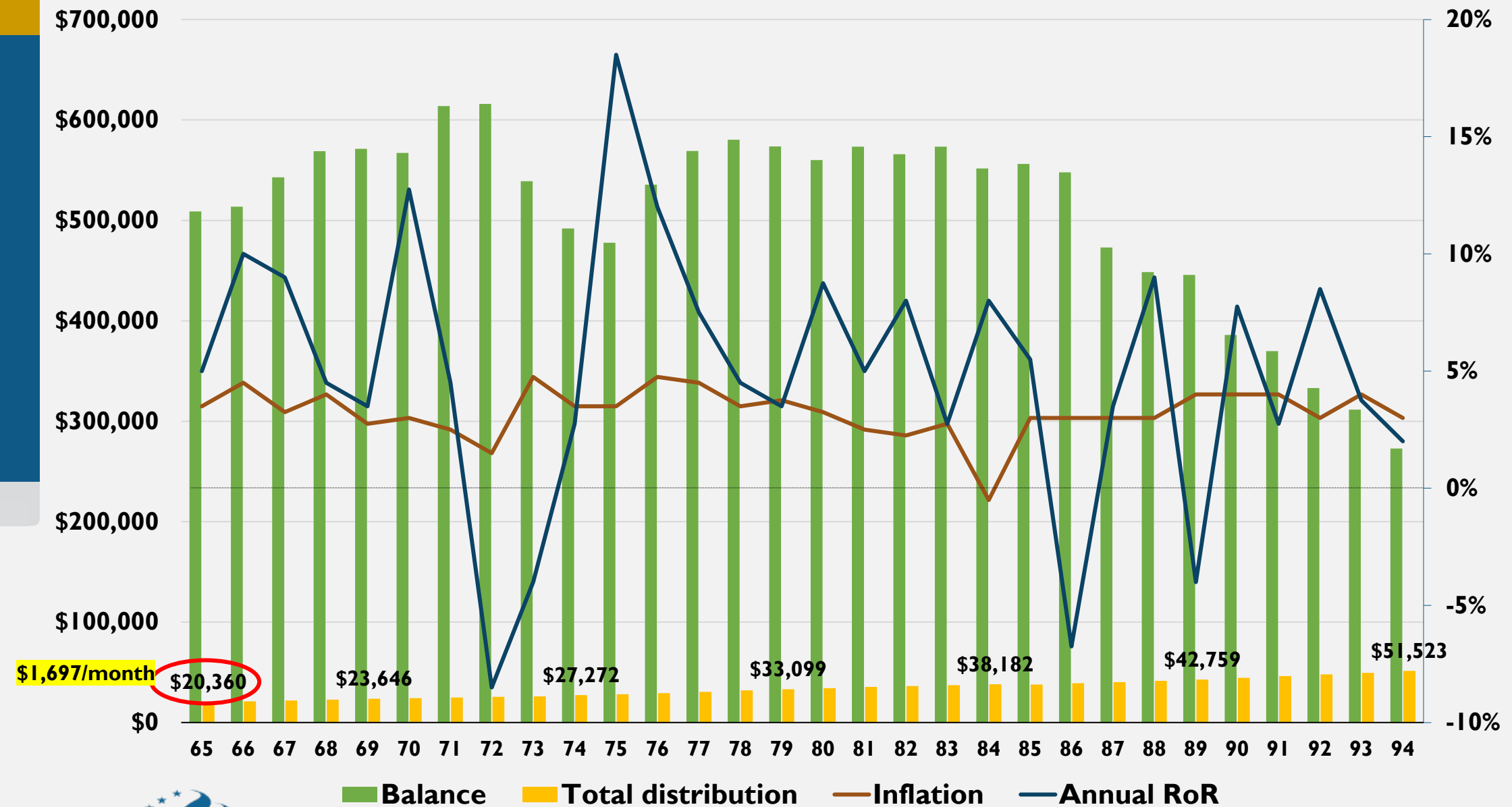


\$8,350

This is his total monthly income need



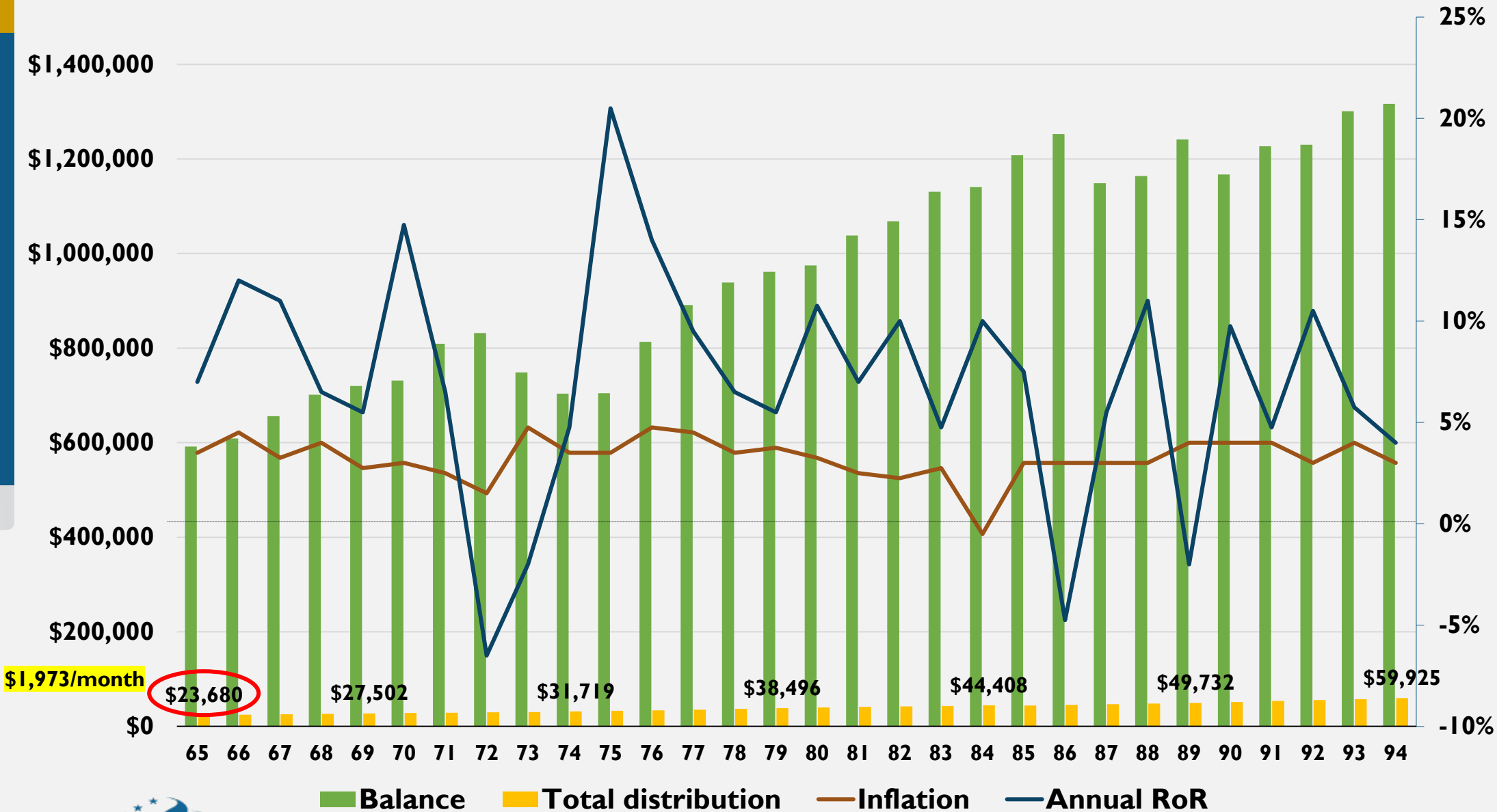
Mike: Beginning balance = \$509,000 & withdrawals @ 4% (5% RoR)



	RoR	Inflation
65	5.00%	3.50%
66	10.00%	4.50%
67	9.00%	3.25%
68	4.50%	4.00%
69	3.50%	2.75%
70	12.75%	3.00%
71	4.50%	1.50%
72	-8.50%	1.50%
73	-4.00%	4.75%
74	2.75%	3.50%
75	18.50%	3.50%
76	12.00%	4.75%
77	7.50%	4.50%
78	4.50%	3.50%
79	3.50%	3.75%
80	8.75%	3.25%
81	5.00%	2.50%
82	8.00%	2.25%
83	2.75%	2.75%
84	8.00%	-0.50%
85	5.50%	3.00%
86	-6.75%	3.00%
87	3.50%	3.00%
88	9.00%	3.00%
89	-4.00%	4.00%
90	7.75%	4.00%
91	2.75%	4.00%
92	8.50%	3.00%
93	3.75%	4.00%
94	2.00%	3.00%
Average	5.00%	3.25%

CAGR = 4.78%

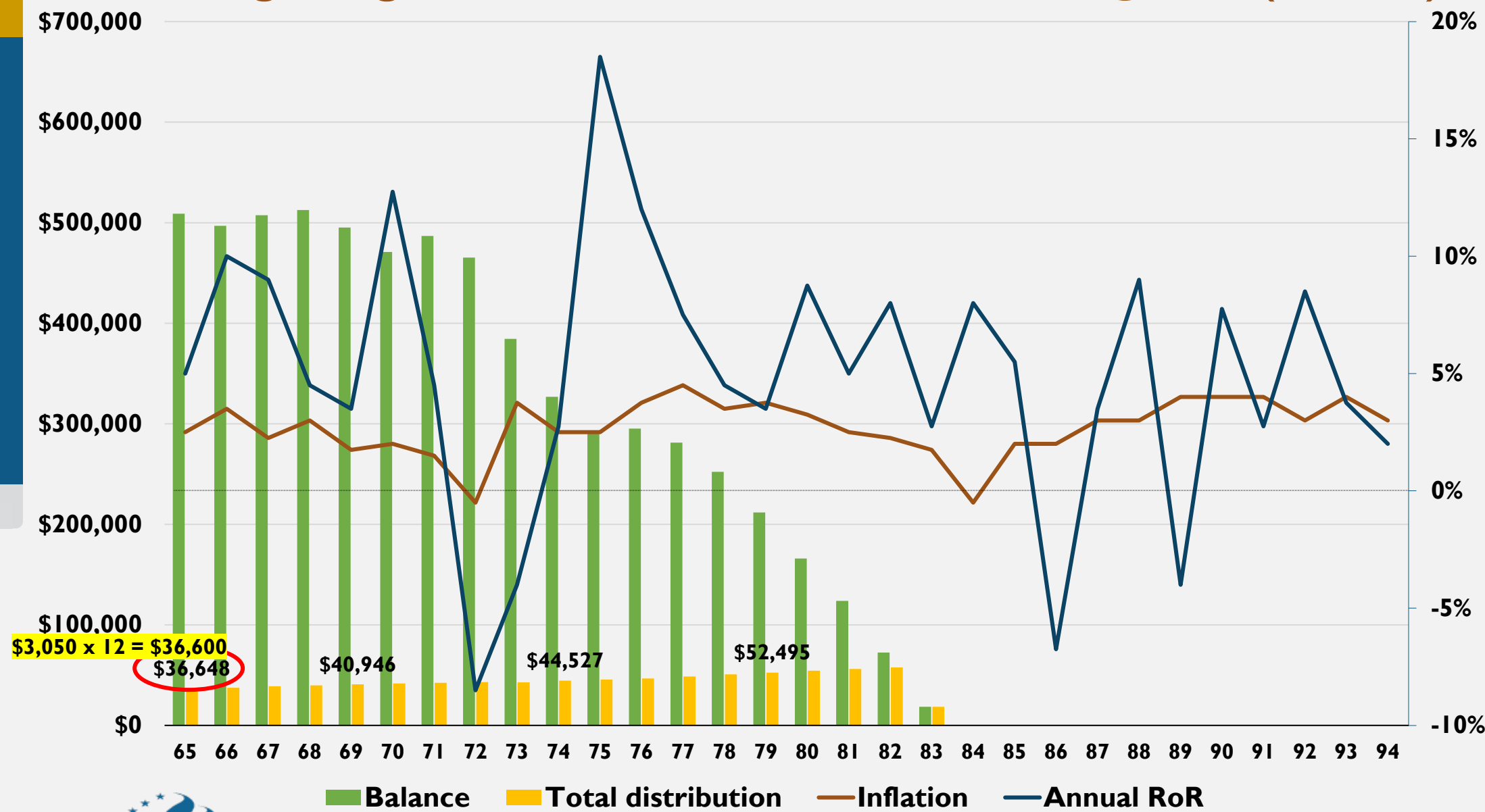
Mike: Beginning balance = \$592,000 & withdrawals @ 4% (7% RoR)



	RoR	Inflation
65	7.00%	3.50%
66	12.00%	4.50%
67	11.00%	3.25%
68	6.50%	4.00%
69	5.50%	2.75%
70	14.75%	3.00%
71	6.50%	1.50%
72	-6.50%	1.50%
73	-2.00%	4.75%
74	4.75%	3.50%
75	20.50%	3.50%
76	14.00%	4.75%
77	9.50%	4.50%
78	6.50%	3.50%
79	5.50%	3.75%
80	10.75%	3.25%
81	7.00%	2.50%
82	10.00%	2.25%
83	4.75%	2.75%
84	10.00%	-0.50%
85	7.50%	3.00%
86	-4.75%	3.00%
87	5.50%	3.00%
88	11.00%	3.00%
89	-2.00%	4.00%
90	9.75%	4.00%
91	4.75%	4.00%
92	10.50%	3.00%
93	5.75%	4.00%
94	4.00%	3.00%
Average	7.00%	3.25%



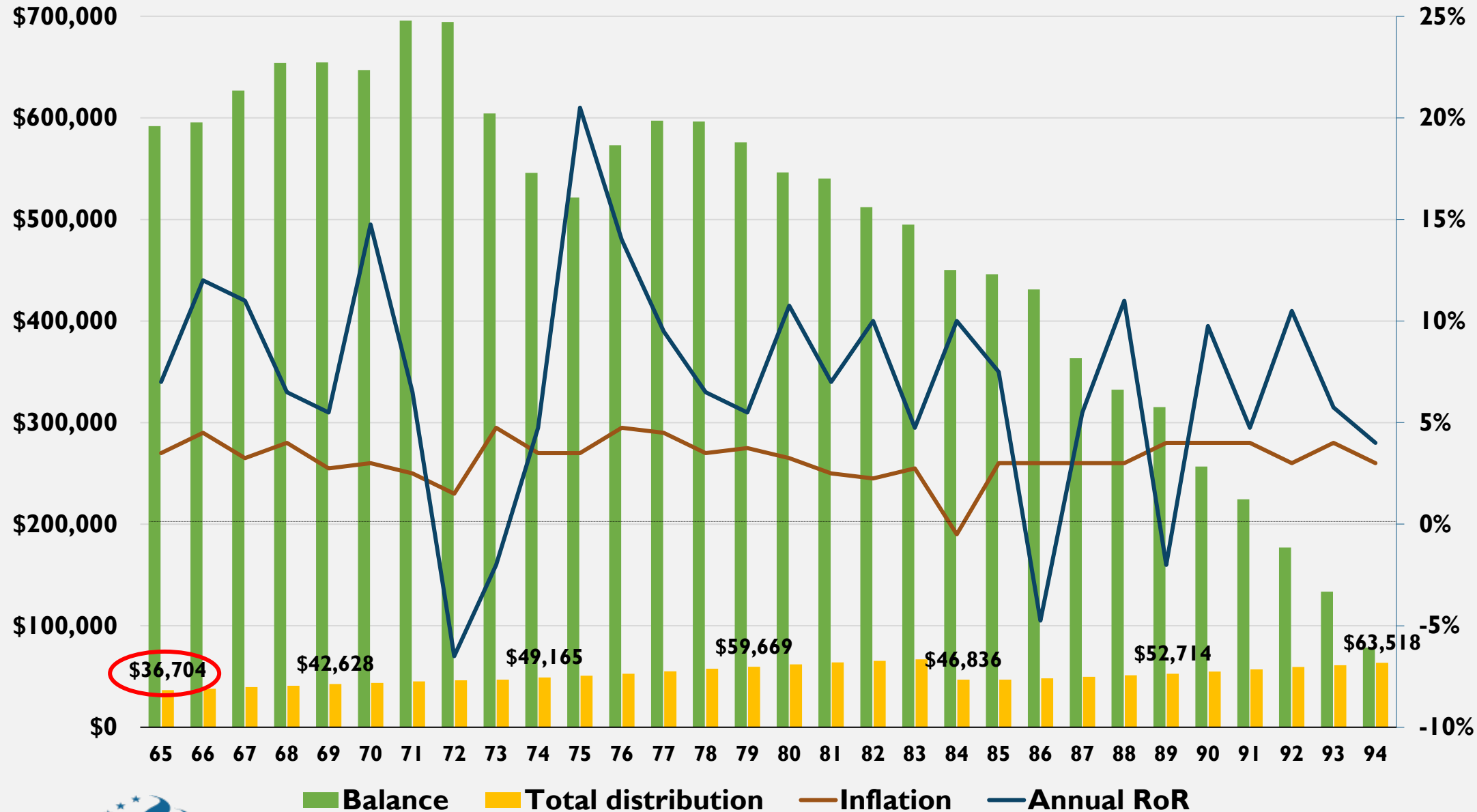
Mike: Beginning balance = \$509,000 & withdrawals @ 7.2% (5% RoR)



	RoR	Inflation
65	5.00%	3.50%
66	10.00%	4.50%
67	9.00%	3.25%
68	4.50%	4.00%
69	3.50%	2.75%
70	12.75%	3.00%
71	4.50%	1.50%
72	-8.50%	1.50%
73	-4.00%	4.75%
74	2.75%	3.50%
75	18.50%	3.50%
76	12.00%	4.75%
77	7.50%	4.50%
78	4.50%	3.50%
79	3.50%	3.75%
80	8.75%	3.25%
81	5.00%	2.50%
82	8.00%	2.25%
83	2.75%	2.75%
84	8.00%	-0.50%
85	5.50%	3.00%
86	-6.75%	3.00%
87	3.50%	3.00%
88	9.00%	3.00%
89	-4.00%	4.00%
90	7.75%	4.00%
91	2.75%	4.00%
92	8.50%	3.00%
93	3.75%	4.00%
94	2.00%	3.00%

Average 5.00% 3.25%
CAGR = 4.78% 94

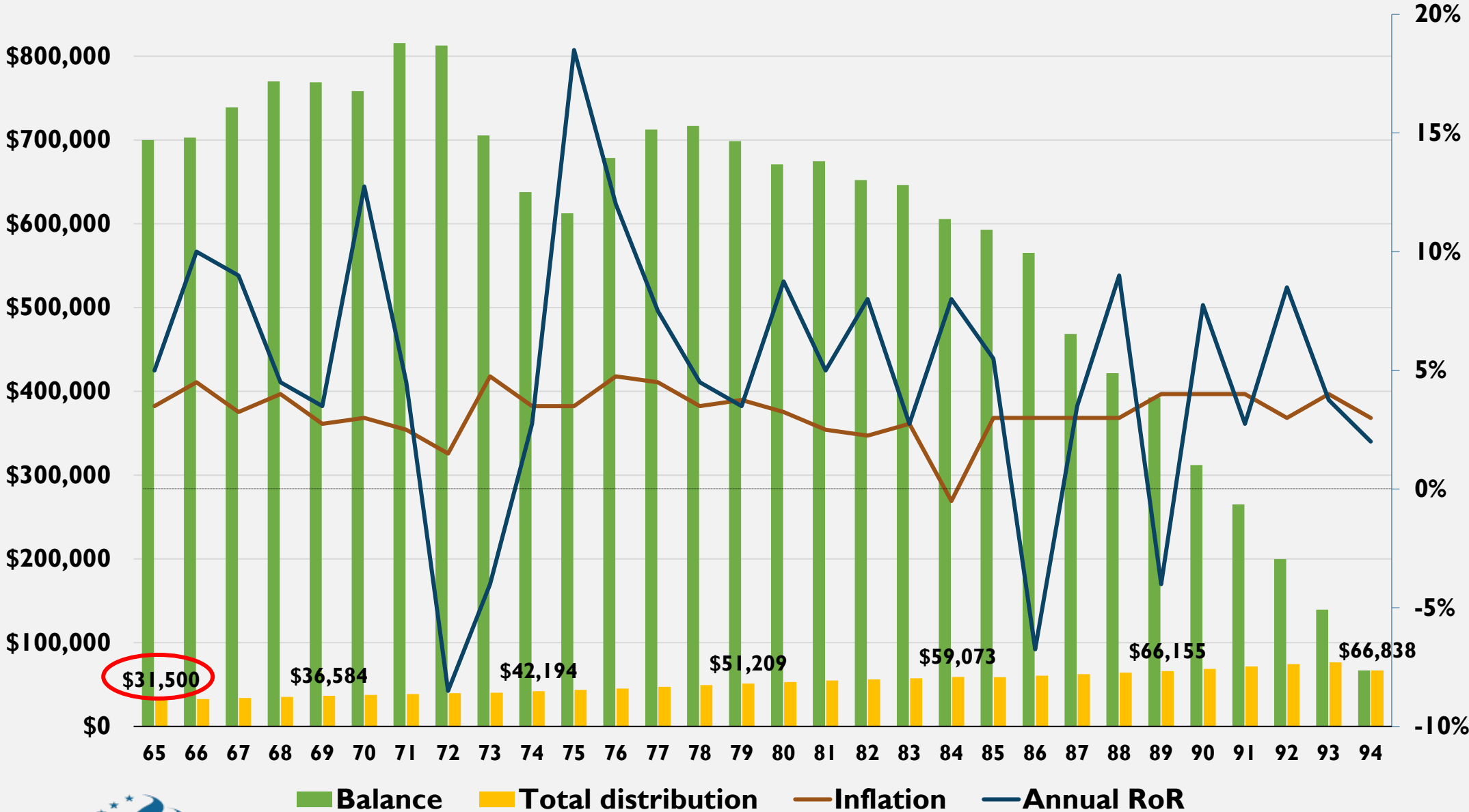
Mike: Beginning balance = \$592,000 & withdrawals @ 6.2% (7% RoR)



	RoR	Inflation
65	7.00%	3.50%
66	12.00%	4.50%
67	11.00%	3.25%
68	6.50%	4.00%
69	5.50%	2.75%
70	14.75%	3.00%
71	6.50%	1.50%
72	-6.50%	1.50%
73	-2.00%	4.75%
74	4.75%	3.50%
75	20.50%	3.50%
76	14.00%	4.75%
77	9.50%	4.50%
78	6.50%	3.50%
79	5.50%	3.75%
80	10.75%	3.25%
81	7.00%	2.50%
82	10.00%	2.25%
83	4.75%	2.75%
84	10.00%	-0.50%
85	7.50%	3.00%
86	-4.75%	3.00%
87	5.50%	3.00%
88	11.00%	3.00%
89	-2.00%	4.00%
90	9.75%	4.00%
91	4.75%	4.00%
92	10.50%	3.00%
93	5.75%	4.00%
94	4.00%	3.00%
Average	7.00%	3.25%

CAGR = 6.71%

Mike: Beginning balance = \$700,000 & withdrawals @ 4.5% (5% RoR)



	RoR	Inflation
65	5.00%	3.50%
66	10.00%	4.50%
67	9.00%	3.25%
68	4.50%	4.00%
69	3.50%	2.75%
70	12.75%	3.00%
71	4.50%	1.50%
72	-8.50%	1.50%
73	-4.00%	4.75%
74	2.75%	3.50%
75	18.50%	3.50%
76	12.00%	4.75%
77	7.50%	4.50%
78	4.50%	3.50%
79	3.50%	3.75%
80	8.75%	3.25%
81	5.00%	2.50%
82	8.00%	2.25%
83	2.75%	2.75%
84	8.00%	-0.50%
85	5.50%	3.00%
86	-6.75%	3.00%
87	3.50%	3.00%
88	9.00%	3.00%
89	-4.00%	4.00%
90	7.75%	4.00%
91	2.75%	4.00%
92	8.50%	3.00%
93	3.75%	4.00%
94	2.00%	3.00%
Average	5.00%	3.25%

CAGR = 4.78%

If Mike begins Social Security benefits at age 70

Retirement

Your estimated monthly benefit amount, beginning at age 70 in 2036, is **\$3,287.00**. For your estimate, we assumed no future increases in prices or earnings.

We have calculated your benefits by making certain assumptions about your past earnings. Please look at these earnings to see if they appear reasonable to you. You can change them and see the effect on your benefit estimates!

[See the earnings we used](#)

Social Security benefits are the foundation on which to build a financially secure retirement. Savings and pensions also are key components of your retirement plan.

Information you submitted

Date of birth: 6/15/1966

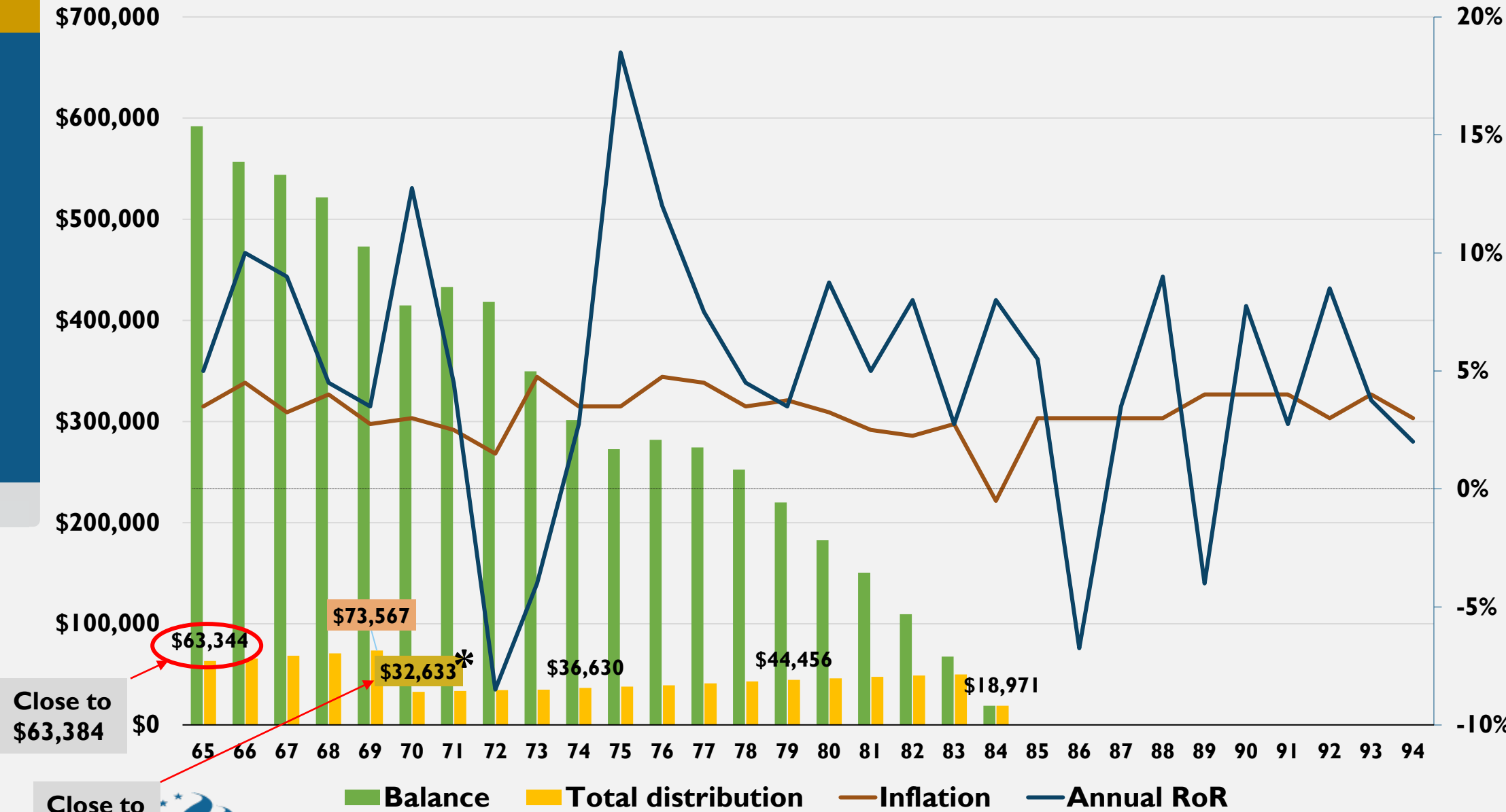
Current earnings: \$96,000.00

Benefit in year-2022 dollars

Retirement month: 6/2036

Mike's annual benefit at age 70 would be: $\$3,287 \times 12 = \underline{\$39,444}$

Mike: Beginning balance = \$592,000 & withdrawals @ 10.7%, then 6.9% @ Year 6 (5% RoR)

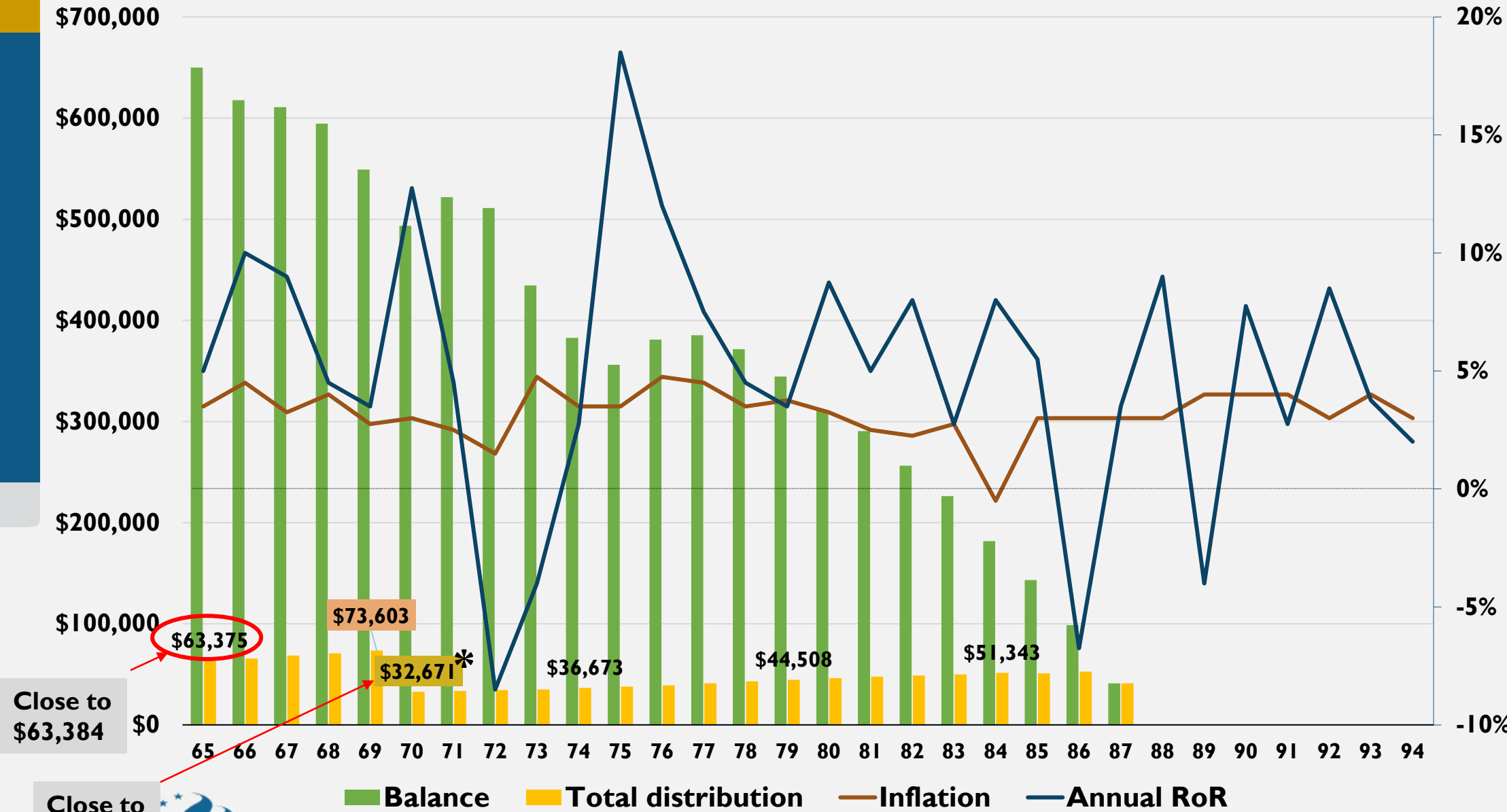


	RoR	Inflation
65	5.00%	3.50%
66	10.00%	4.50%
67	9.00%	3.25%
68	4.50%	4.00%
69	3.50%	2.75%
70	12.75%	3.00%
71	4.50%	1.50%
72	-8.50%	1.50%
73	-4.00%	4.75%
74	2.75%	3.50%
75	18.50%	3.50%
76	12.00%	4.75%
77	7.50%	4.50%
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79	3.50%	3.75%
80	8.75%	3.25%
81	5.00%	2.50%
82	8.00%	2.25%
83	2.75%	2.75%
84	8.00%	-0.50%
85	5.50%	3.00%
86	-6.75%	3.00%
87	3.50%	3.00%
88	9.00%	3.00%
89	-4.00%	4.00%
90	7.75%	4.00%
91	2.75%	4.00%
92	8.50%	3.00%
93	3.75%	4.00%
94	2.00%	3.00%

Average 5.00% 3.25%

CAGR = 4.78% 98

Mike: Beginning balance = \$650,000 & withdrawals @ 9.75%, then 5.95% @ Year 6 (5% RoR)

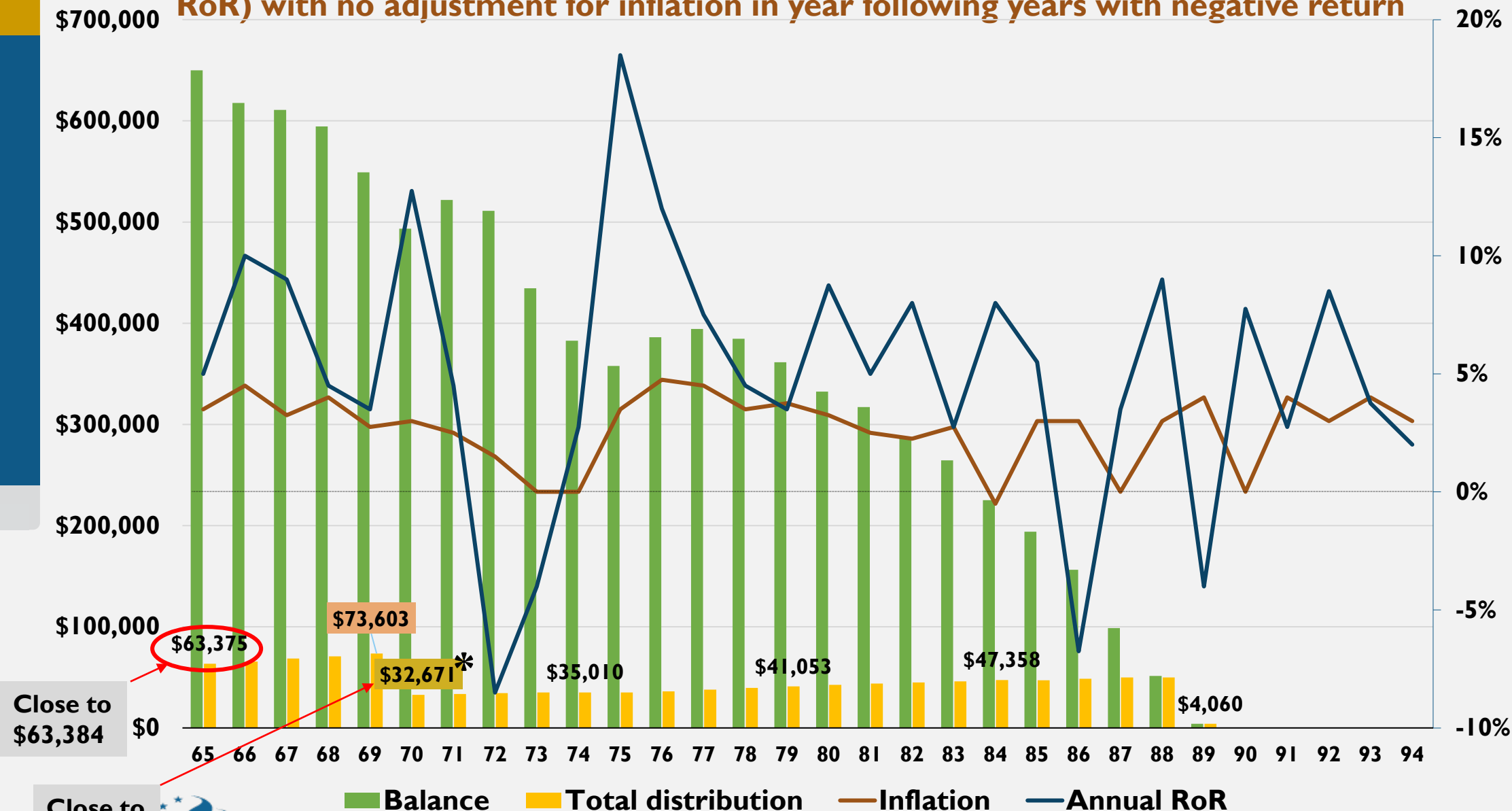


	RoR	Inflation
65	5.00%	3.50%
66	10.00%	4.50%
67	9.00%	3.25%
68	4.50%	4.00%
69	3.50%	2.75%
70	12.75%	3.00%
71	4.50%	1.50%
72	-8.50%	1.50%
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85	5.50%	3.00%
86	-6.75%	3.00%
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88	9.00%	3.00%
89	-4.00%	4.00%
90	7.75%	4.00%
91	2.75%	4.00%
92	8.50%	3.00%
93	3.75%	4.00%
94	2.00%	3.00%

Average 5.00% 3.25%

CAGR = 4.78% 99

Mike: Beginning balance = \$650,000 & withdrawals @ 9.75%, then 5.95% @ Year 6 (5% RoR) with no adjustment for inflation in year following years with negative return



	RoR	Inflation
65	5.00%	3.50%
66	10.00%	4.50%
67	9.00%	3.25%
68	4.50%	4.00%
69	3.50%	2.75%
70	12.75%	3.00%
71	4.50%	1.50%
72	-8.50%	1.50%
73	-4.00%	0%
74	2.75%	0%
75	18.50%	3.50%
76	12.00%	4.75%
77	7.50%	4.50%
78	4.50%	3.50%
79	3.50%	3.75%
80	8.75%	3.25%
81	5.00%	2.50%
82	8.00%	2.25%
83	2.75%	2.75%
84	8.00%	-0.50%
85	5.50%	3.00%
86	-6.75%	3.00%
87	3.50%	0%
88	9.00%	3.00%
89	-4.00%	4.00%
90	7.75%	0%
91	2.75%	4.00%
92	8.50%	3.00%
93	3.75%	4.00%
94	2.00%	3.00%

Average 5.00% 2.74%

CAGR = 4.78%

Key Takeaways

- Decisions regarding taking distributions (withdrawals) from your TSP account require careful planning to meet your retirement income goals:
 - Maintain your desired overall standard of living in retirement
 - Be able to fund your essential expenses in retirement
 - Have funds available for spending shocks
 - Leave assets for subsequent generations or charities
- You can make better estimates about how much you need to save if you:
 - Understand the risks associated with taking distributions, and
 - Make assumptions that take those risks into account
- The Thrift Savings Plan offer significant advantages to retirees during the drawdown phase of retirement to mitigate risks:
 - Flexible distribution options
 - Flexible reallocation options
 - Easily adaptable to any drawdown strategy
 - Broad diversification
 - Lifecycle Funds
 - Variety of income annuity options



Contacting the TSP

We're here to help.



AVA virtual assistant

Get help from AVA, the TSP virtual assistant, to get answers to general questions. To ask AVA account-specific questions and to connect to a ThriftLine Representative during business hours for a live chat session, log in to My Account and select the icon found on the bottom right of the page.



ThriftLine: 1-877-968-3778 (toll free)

Business Hours: Monday -Friday from 7:00 a.m. to 9:00 p.m. Eastern Time

International: (404) 233-4400 (not toll free)



Email us

To contact ThriftLine outside of business hours, please email thriftline@tsp.gov. Do not email personally identifiable information.



General mailing address

ThriftLine Service Center
C/O Broadridge Processing
PO Box 1600
Newark, NJ 07101-1600

General fax number

1-352-730-9974



Secure participant mailbox

For account-specific communication sent electronically, log in to [My Account](#) and select the notification icon on the far right, to access your Secure Mailbox.



We help people retire with dignity

We administer the TSP solely in the interest of participants and beneficiaries

We help participants make smart choices



Survey

Thank you for taking the time to complete this short survey about your recent TSP training event. Your participation in this survey is voluntary but keep in mind the FRTIB (TSP) Education and Outreach Division uses these to improve the learning experience for TSP Participants, Beneficiaries, Agency and Service Representatives.



Please consider your answers carefully. This survey will be used to improve our services and provide you with information that is timely, relevant, and informative

<https://www.surveymonkey.com/r/LXMZRMZF>

